DE BOW'S REVIEW:

A MONTHLY JOURNAL

OF

Commerce, Agriculture, Manufactures, Internal Improvements, Statistics, etc., etc.

ESTABLISHED JANUARY 1, 1846.

VOL. XVII. NOVEMBER, 1854. No. 5.

Art. I.—EDUCATION OF THE DEAF AND DUMB IN EUROPE AND AMERICA.

GIBBON has very justly observed, that the degree of civilization of a nation is distinctly marked by the character of its penal laws and modes of punishment; but he might have added, that a more certain index of the degree of civilization might be found in the presence or absence of certain institutions. All nations have institutions of some kind, and these infallibly mark the character and degree of civilization.

What a striking contrast there is between the civilization of the best days of Greece and Rome, and that of the 19th century! And what are the most prominent characteristics of this civilization of ours? Are they not our educational humane institutions—our noble institutions for the maintenance and education of the deaf, dumb, the blind, the insane, and the idiotic? These infallibly denote the character of the civilization of the age. These were utterly unknown to ancient civilization. Indeed, so wide is the difference between modern and ancient civilization, in respect to the amelioration of the social and physical condition of men, that the latter hardly deserves the name. If we of the 19th century are in the highest ranks of civilization, the Greeks and Romans certainly occupied the lowest, one step lower being genuine barbarism. They certainly had not advanced far enough in civilization to have what we may call a national sentiment of humanity; for where that exists, it will always be actualized in the form of humane institutions. Nothing more distinguishes a civilized from a semi-barbarous or savage state of society, than the establishment of institutions for the amelioration of the condition of those unfortunate persons who are incapacitated for the active pursuits of life by the loss of some one or more of those faculties which are essential to a complete organization.

The ancients, it is true, had asylums; but they were very

different institutions from those so called of the present day. They were not so much humane institutions, as institutions for the delay or subversion of justice. The Greek and Roman *asyla* were temples, altars, groves, and statues of the gods or of emperors, which, from custom alone, possessed the privilege of protecting slaves, debtors, and criminals who fled to them for refuge. The laws, however, did not recognize the right of all such places to the protection which was claimed; but conferred the *ασυλια*, or *jus asyli*, only upon a certain number of temples, altars, &c., such as the Theseum at Athens, which was chiefly for the protection of the ill-treated slaves, who could take refuge there, and compel their masters to sell them to some other person; the Altar of Pity—*ελέου βωμος*—supposed to have been built by Hercules; the Altar of Zeus, *Αγοραῖος*; the Altars of the Twelve Gods; of the Eumenides on Mars Hill; of Artemis, at Munychia. In other parts of Greece there were also *asyla*, the most celebrated of which were the Temple of Poseidon in Laconia and in Calauria, and the Temple of Athena Alea in Tegea.

Custom, however, among the ancients, seems to have been more powerful than law, for all sacred places were supposed to protect an individual to a certain extent, whatever his crime might be, even if their right to do so was not recognized by the laws of the State in which they were situated. The laws, however, while they gave no power to enter and lay hands upon the fugitive, did not forbid the application of fire and smoke, or the besieging of the fugitive, until famine drove him out. The application of fire was common, as we infer from what Hermione says to Andromache—*πῦρ σοι προσοισω*—in Euripides; and in Plautus, from the words of Theuropides to Tranius, who had fled to an altar—"*Ioni jubebo ignem et sarmenta, carnifex, circumdari.*"

In the reign of the Emperor Tiberius, these places of refuge had become so numerous in Greece and Asia Minor, as seriously to impede the administration of justice; and accordingly the Roman Senate, by a command of the Emperor, limited the *jus asyli* to only a few cities; though, according to Suetonius, he entirely abolished them. Thebes and Athens claim the honor of establishing the first asylums in Greece, and Romulus in Italy. But that of Romulus, on the side of the Capitoline Hill, was not for the protection of fugitives from Roman justice, so much as for that of foreign refugees, who thereby materially augmented the population of his infant city. Juvenal, who was fond of assailing the pedigree of the Upper Ten Thousand of his day, satirically refers all the aristocracy of Rome to this ignoble stock:

"Et tamen ut longe repetas, longeque revolvas
Nomen ab infami gentem deducis asylo."

These *asyla* were long retained by Paganism, and were en-

grafted even upon Christianity. The Roman Emperor Antoninus Pius decreed "that, if a slave in a province fled to the temples of the gods or to the statues of the emperors, to avoid the ill-usage of his master, the *præses* could compel the master to sell the slave; and the slave was not regarded by the law as a runaway—*fugitivus*." In the time of Justinian, the *jus asyli* was extended to Christian churches, the old law of Antoninus Pius being adapted to the times by substituting the words *ad ædem sacram*, for *ad fana deorum*. But still, Christianity had not yet made the *asylum* anything different from what it was at first. It was left for the glory of later ages to conceive and found those noble institutions for the deaf and dumb, blind, insane, and idiotic, which now are the highest ornament of humanity, and the certain evidences of the high civilization and refinement of the age. They are the noblest fruits of Christianity. Now, almost every Christian country has institutions for this unfortunate class, by which the defects of the senses are supplied by art, so that the deaf, dumb and blind are educated in all of the more useful departments of learning. Thousands of human beings who were, until the present age of the world, consigned to utter neglect, and suffered to perish in entire ignorance as the beasts, because there was not sufficient art and humanity in the world to devise relief for them, are now highly educated and made useful members of society. Though we have no reliable statistics regarding the number of the deaf, dumb and blind of former ages, yet it is probable that there were then as many of that unfortunate class as now, all of whom were consigned to hopeless neglect—to die as beings for whom there could be no relief.

That some idea may be formed of the progress of philanthropy in respect to this unfortunate class, we here present such statistics of humane institutions, both of Europe and America, as our meagre resources for such information admit. The following tabular statements we compile from various reliable sources:

Deaf and Dumb Asylums in the United States.

State.	Location.	When Established.	No. of Pupils.		Total.	Annual Expenditure.	No. of Teachers.
			M.	F.			
Alabama	Robinsons's Springs	1852	—	—	—	$5,000	—
Connecticut	Hartford	1816	116	84	200	55,632	3
Georgia	Cave Spring	—	—	—	—	8,000	3
Illinois	Jacksonville	1851	—	—	109	37,409	6
Indiana	Indianapolis	—	91	61	152	19,206	—
Kentucky	Danville	1822	—	—	70	—	—
Louisiana	Baton Rouge	—	—	—	—	—	—
Michigan	Kalamazoo	1848	—	—	—	—	—
Missouri	Fulton	1851	23	18	41	2,400	—
New-Jersey	—	—	—	—	—	—	—
New-York	New-York	1818	159	119	278	47,582	15
North Carolina	Raleigh	1848	—	—	—	—	5
Ohio	Columbus	1852	—	—	129	14,250	8
Penusylvania	Philadelphia	1820	98	65	143	40,359	9
Tennessee	Knoxville	1845	—	—	—	—	—
Virginia	Staunton	—	—	—	137	12,000	—
Wisconsin	Delavan	1851	—	—	8	300	—
Totals					1,267	287,198	—

The above are all State institutions, and are supported by appropriations of the legislatures and by the tuition fees of pupils from other States. Some of the States, as New-Hampshire, Vermont, New-Jersey, Rhode Island, Massachusetts, have a fund for the education of the deaf and dumb, but no institutions; others have provided by enactments for the establishment of institutions for the deaf and dumb, which enactments have not yet been carried into effect.

Institutions for the Insane in the States.

State.	Location.	When Established.	Number. M.	Number. F.	Total.	Annual Expenditure.
Connecicut	Hartford	1824	80	90	170	$36,349
Georgia	—	—	—	—	—	—
Illinois	Jacksonville	1851	43	39	82	33,500
Indiana	Indianapolis	1848	215	199	414	27,000
Kentucky	Lexington	1822	—	—	—	—
"	Hopkinsville	1852	—	—	—	—
Louisiana	Jackson	—	—	—	86	7,500
Maine	Augusta	1845	—	—	157	—
Maryland	Baltimore	—	—	—	—	—
"	"	—	—	—	—	—
Massachusetts	Worcester	1833	264	268	532	44,000
"	Taunton	1846	—	—	145	—
Michigan	Flint	1848	—	—	—	—
Mississippi	Jackson	1848	—	—	—	—
Missouri	Fulton	1847	36	34	70	12,000
New-Hampshire	Concord	1840	70	73	143	12,796
New-Jersey	Trenton	1848	91	91	182	30,000
New-York	Utica	—	200	190	390	31,000
"	Blackwell's Island	—	—	—	536	—
Ohio	Columbus	1838	138	142	280	33,200
Pennsylvania	Philadelphia	1836	115	100	215	54,000
Rhode Island	Providence	1844	—	—	—	4,200
South Carolina	Columbia	—	—	—	—	—
Tennessee	Nashville	1851	—	—	105	—
Vermont	Brattleboro'	1836	—	—	139	41,800
Virginia	Williamsburgh	—	126	86	212	29,000
"	Staunton	—	201	138	339	35,000

Institutions for the Blind in the United States.

State.	Location.	When Established.	No of Pupils. M.	No of Pupils. F.	Total.	Amount of Expenditures.	No of Teachers.
Georgia	—	—	—	—	—	—	—
Illinois	Jacksonville	1853	14	11	25	$5,000	—
Indiana	Indianapolis	1848	—	—	51	8,000	—
Kentucky	Louisville	1842	—	—	50	—	—
Massachusetts	Boston	1833	—	—	—	—	—
Michigan	Kalamazoo	1848	—	—	—	—	—
Mississippi	Jackson	1850	—	—	—	—	—
Missouri	St. Louis	1851	—	—	14	6,000	1
New-York	New-York	1836	—	—	153	31,430	8
North Carolina	Raleigh	1848	—	—	—	—	6
Ohio	Columbus	1836	34	32	66	9,000	—
Pennsylvania	Philadelphia	—	—	—	93	—	—
Tennessee	Nashville	1844	—	—	—	2,500	—
Virginia	Staunton	—	—	—	83	9,000	—
Wisconsin	Janesville	—	—	—	9	2,500	—
Totals					544	73,430	—

The States of Iowa, Maryland, Michigan, New-Jersey, Rhode Island, and Vermont, have no institutions for the blind; but all of them have a State fund for the education of the blind in other State institutions. Louisiana has an institution for the blind, in its incipiency, at Baton Rouge. It is, we believe, only partially organized. Some of the other States have institutions

* Private institution.

for the blind, provided for by laws which are not yet carried into effect. South Carolina has a private institution for the blind at Spartanburg.

In 1846, there were only *six* institutions for the instruction of the blind in the whole United States. There are now, as is shown by the preceding table, 17, including that of Baton Rouge and the Spartanburg institution of South Carolina.

Of the institutions for the blind, insane, and deaf and dumb of foreign countries we have no very reliable statistics, except of those for the deaf and dumb; for these latter there are, in

	Institutions.		Institutions.
Great Britain	16	Saxony, Hanover, and the other German States	15
France	44	German Free Cities	4
Italy	9	Belgium and Holland	8
Switzerland	10	Denmark, Norway and Sweden	4
Austria	9	Russia and Poland	2
Prussia	22		
Bavaria	10	Total	159
Wurtemberg and Baden	6		

Such is the statement, as given in the *Encyclopædia Americana* of Dr. Lieber, for the year 1846. We have no later European statistics on the subject. Some of these European institutions date earlier than the commencement of this Republic. That of Paris was founded in 1760.

According to Dr. Lieber, there were, in 1846, 53,000 deaf and dumb persons under instruction in the whole world. The number in the United States, as by the table above, at the present time, is 1,267; which would leave 51,733 deaf and dumb pupils for Europe, on the supposition that no new institutions have been founded there since 1846. The first official enumeration of the deaf and dumb ever made in England was that of 1851; but the results have not yet appeared, the returns having been destroyed by fire after they were printed. We regard it as a defect in our own census of 1850, that while a complete enumeration of all schools was required to be returned, those for the deaf, dumb, and blind, which are just as much schools as any others, were omitted altogether, or only partially returned. We are thus left comparatively in the dark in regard to one of the greatest philanthropic movements of the age.

In respect to institutions for the blind, this country is rather in advance of Europe, so far as education is concerned. The European institutions are generally asylums where totally blind *adults* may acquire and pursue some trade for a livelihood;* while in this country the education of the blind takes a wider range than that of fitting them for some trade. In our institutions, great attention is paid to mental culture, and the pupils are, many of them, even highly educated—at least as much so as other pupils of our common schools. Many of them are fitted for teaching the blind, and, of course, must be well educated themselves.

* Dr. Francis Lieber: *Encyc. Amer.*

The capability of the blind to receive instruction was once a question; and the world are mainly indebted to the indefatigable exertions and genius of Dr. S. G. Howe and Mr. J. R. Friedlander, the founder of the Pennsylvania Institution, for having established in this country the fact of such capability. The system of instruction is now so perfected, that the blind can not only read, but acquire a knowledge of most of the sciences. Blind pupils of our American institutions put to the blush thousands of *seeing* pupils of other schools.

As to the actual number of the deaf and dumb of all countries, we shall now attempt to arrive at some conclusion, beginning with the United States. According to the census of 1850, the number of deaf and dumb in this country is as follows:

STATES.	DEAF AND DUMB.		
	Whites.	Free Colored.	Slaves.
Maine	265	1	—
New-Hampshire	162	—	—
Vermont	147	1	—
Massachusetts	356	2	—
Rhode Island	62	3	—
Connecticut	398	6	—
New-York	1,256	7	—
New-Jersey	184	5	—
Pennsylvania	1,130	15	—
Delaware	48	4	2
Maryland	197	38	26
District of Columbia	17	2	—
Virginia	540	13	89
North Carolina	389	7	75
South Carolina	134	2	29
Georgia	208	1	57
Florida	13	—	11
Alabama	151	1	58
Mississippi	79	1	27
Louisiana	82	3	32
Texas	49	—	10
Arkansas	80	—	4
Tennessee	334	2	41
Kentucky	507	5	51
Missouri	263	—	19
Illinois	354	2	—
Indiana	533	4	—
Ohio	905	10	—
Michigan	124	1	—
Wisconsin	69	—	—
Iowa	59	—	—
California	7	—	—
TERRITORIES.			
Minnesota	—	—	—
New-Mexico	34	—	—
Oregon	—	—	—
Utah	—	—	—
Total	9,136	136	531

The following very interesting table we take from the Report of the New-York Institution for the Deaf and Dumb for 1853:

Numbers and Proportion of Deaf Mutes in Europe and America.

Countries.	Date of Enumeration.	Deaf Mutes. Males.	Females.	Total.	Population.	Proportion of Deaf Mutes.
Ireland	1851..	— ..	— ..	4,151..	6,553,210..	1:1579
Scotland	1848..	915..	750..	1,665..	2,720,000..	1:1633
France	1853..	— ..	— ..	29,512..	35,783,170..	1:1212
Belgium	1835..	963..	783..	1,746..	3,885,507..	1:2226
Limburg	1835..	55..	35..	90..	165,704..	1:1841
Luxemburg	1835..	37..	30..	67..	153,801..	1:2295
Holland	1833..	— ..	— ..	1,250..	2,500,000..	1:2000
Prussia	1849..	— ..	— ..	11,973..	16,331,187..	1:1364
Saxony	1837..	665..	514..	1,179..	1,652,114..	1:1401
Bavaria	1843..	— ..	— ..	2,149..	4,440,327..	1:2066
Hanover	1833..	633..	478..	1,111..	1,642,807..	1:1479
Altenburg	1836..	55..	48..	103..	120,514..	1:1170
Saxe Weimar	1834..	— ..	— ..	334..	238,672..	1:715
Brunswick	1839..	— ..	— ..	184..	259,774..	1:1412
Bohemia	1836..	— ..	— ..	2,135..	4,100,000..	1:1920
Denmark	1834..	337..	293..	630..	1,225,807..	1:1942
Norway	1835..	598..	493..	1,091..	1,065,825..	1:977
Sweden	1840..	1,061..	938..	1,999..	3,054,726..	1:1528
Switzerland, Berne	1836..	1,043..	912..	1,955..	401,707..	1:206
Do., Argovie	1836..	— ..	— ..	960..	182,000..	1:189
Do., Leman	1836..	— ..	— ..	152..	155,009..	1:1019
Do., Vaud	1836..	— ..	— ..	160..	178,000..	1:1112
Do., Zurich	1840..	145..	121..	266..	232,000..	1:872
Sardinia	1834..	2,825..	1,953..	4,778..	3,675,327..	1:769
Tuscany	1843..	390..	307..	697..	1,513,820..	1:2171
Modena	1838..	212..	151..	363..	479,191..	1:1320
Totals for Europe	— ..	— ..	— ..	70,700..	92,710,190..	1:1311
United States, whites	1850..	5,027..	4,058..	9,085..	19,557,271..	1:2152
Do., color'd.	1850..	354..	278..	632..	3,633,803..	1:5750
Lower Canada	1831..	— ..	— ..	408..	511,917..	1:1255
General Total	— ..	— ..	— ..	80,825..	116,413,181..	1:1441

It will be seen that Baden is not included in the table, the returns from that country being contradictory. Dr. Schmalz, however, of Dresden, estimates the proportion at 1 in 1,000. The proportion of deaf mutes in Ireland, as given in the table, is less than the average of Europe, which is thought not to be compatible with the general poverty and wretchedness of that country. It appears that the number, 4,151, given in the table, was not that originally returned by the census of 1851, which made the number of deaf mutes in Ireland 4,814, or 1 in every 1,361 souls; which is about the proportion of Prussia. It appears that the number 4,151 was substituted for 4,814, at the suggestion of Dr. Wilde, who detected some errors in the census, by a sifting process which neglected to ascertain whether some deaf mutes had not been *omitted* in the original returns, taking it for granted that the number returned was too great, without demonstrating the impossibility of its being too small. The only safe mode of going behind a census return is to take the census over again. "It seems very probable," says Mr. Peet, of the New-York Deaf

and Dumb Institution, in his report to the Legislature, "that deaf-dumbness is not less prevalent in Ireland than in Europe generally."

From the preceding table, showing the number and proportion of deaf mutes in Europe and America, it appears that the proportion of deaf mutes in the United States is greatly less than in Europe, and that our colored population have a still less proportion of deaf mutes than the whites. After making the most liberal allowances for all errors in the data of the calculation, it appears that there are in the United States less than 600 deaf mutes in a million, while in Europe there are nearly 800.

In respect to the proportion of the males to the females among the deaf and dumb, all enumerations, both European and American, agree in making the male sex largely in the majority. The following statement shows the proportion of male and female deaf mutes to the whole population in Europe and America:

	Males.	Females.
Europe	1:1100	1:1500
America	1:1910	1:2265

This exhibits a remarkable result, since in Europe and America the female population outnumbers the male. The same disproportion of sexes is also found among the blind, the idiotic, and the still-born, and also among those who die in infancy and childhood; whence we deduce the following law: *That the male sex everywhere is more liable to premature disease and death, and to the non-development or loss of the faculties, than the female.*

In respect to the still-born, though it must be admitted that our statistics on this subject are not sufficiently general, the number of still-born throughout the United States, for several successive censuses, should be known before we can be quite positive in regard to the above law. The number for 1850 could easily be gathered from the returns. In New-York city, in 1850, the male still-born were to the female as 100:70. We are not prepared to say with some, that the above difference between males and females is inherent in the constitution of the sexes, but prefer to ascribe it to a difference in physical training and habits. Female children are in general better clothed than male; the former are kept in the house, while the latter are allowed to run in the streets. Boys contract certain habits injurious to health, which girls do not; boys are more exposed to the weather in winter than girls. Girls in general outlive boys, for the same reason that women in general outlive men.

In the Union generally, the deaf and dumb males and females are to one another as 5:4; and among the blind, the males are to the females as 4:3. This is very properly ascribed, we think, to the greater liability of males to diseases and accidents.

It will be observed, on inspecting the tabular view which we have given of the Deaf and Dumb Asylums in the United States, that the male pupils in general greatly exceed in number the female; which ought to be the case, as the former outnumber the latter. Some allowance, however, must be made for the fact, that parents generally consider it more important to educate their male deaf mutes than the female.

All deaf mutes may be divided into two classes—*congenital* and *accidental*. In the European returns this distinction is carefully observed; and it is to be regretted that such is not the case in our own census. All that is known of this branch of our subject in this country, is derived from the statistics of our schools. From these the origin of deafness has been able to be assigned in more than three thousand cases; and the result, so far, is, that *congenital* deafness is more common than *accidental* or acquired—the former being to the latter as 1812 : 1569. The following table embodies all that is known on the subject, as regards this country:

Pupils of American Schools.

Institutions.	Born Deaf.			Become Deaf.			Unknown Cases.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Hartford, to May, 1851	286	251	537	275	188	463	37	23	60
New-York, to January, 1854*	240	252	492	254	177	431	130	95	225
Ohio, to December, 1853	121	88	209	151	116	267	51	33	84
Kentucky, 1849 to 1851	31	13	44	17	15	32	7	2	9
Indiana, 1849 to 1851	65	39	104	50	32	82	8	1	9
Illinois, January, 1851	26	18	44	19	24	43	4	4	8
Tennessee, 1849	12	7	19	8	—	8	2	2	4
Sum	781	688	1,449	774	552	1,326	239	160	399
Deduct for repetitions, (members of more than one school),	10	3	13	4	4	8	1	—	1
Remains	771	665	1,436	770	548	1,318	238	160	398
Philadelphia, to January, 1840	—	—	220	—	—	135	—	—	73
Philadelphia, January, 1842, to January, 1853	—	—	156	—	—	116	—	—	3
General Totals	—	—	1,812	—	—	1,569	—	—	474

From this table it appears the number of males in each category is nearly the same, while the females born deaf are to those of accidental deafness as 5 : 4. Of those born deaf, the males are to the females as 7 : 6. In the cases of accidental deafness, the males are to the females as 3 : 2.

In Europe, so far as researches on this subject have been made, the proportion of cases of accidental deafness, except in the German schools, is much smaller than in this country, as will be seen by the following table, compiled from the reports of European deaf and dumb institutions:

* Excluding idiots, 16 males and 1 female, most of whom were not deaf. It is to be observed, that of the 225 unknown, 25 were classed by Dr. Akerly as accidentally deaf, but the particulars have been lost.

Country or Institution.	Congenital.	Accidental.
Ireland, (1851,)	3,484	503
Belgium, (1835,)	1,484	407
Modena, Duchy of, (1838,)	267	86
Tuscany, (1843),	432	265
Groningen, Holland, Inst., (to 1845,)	409	185
Paris, Inst., (1829 to 1836,)	171	67
Nancy, France, Inst., (1828 to 1850,)	233	67
Copenhagen, Inst., (before 1836,)	54	34
Yorkshire, Eng., Inst., (to 1835,)	75	26
St. Petersburgh, Inst., (1836,	49	12
Saxe-Altenburg, Duchy.	82	21
Sum of European returns, except the German Schools..	6,740	1,673
Institution of Hamburg, (to 1847,)	31	26
" Leipsic, (to 1838,)	54	69
" Dresden, (to 1838,)	27	11
" Munich, (1804 to 1835,)	79	57
" Pforzheim, (1833,)	19	43
" Prague, (1836,)	77	88
" Cologne, (to 1850,)	33	52
Sum of the German Schools	320	345

This table discloses the remarkable fact, that, while in Europe generally, including even Saxe-Altenburg, in the heart of Germany, the congenitally deaf mutes are full four times as numerous as the accidentally deaf mutes; on the contrary, seven of the principal German schools return 320 cases of congenital deafness to 345 accidental—a proportion of 13 : 14. This result is ascribed to the German articulation system of instruction, which excludes, as incapable of instruction, many congenitally deaf mutes.

The contrast which the deaf and dumb statistics of the United States and Europe present is very striking, says Mr. Peet, (in his late Report on the Deaf and Dumb to the Legislature of New-York :)

"With respect to the relative prevalence of accidental and congenital deafness. In Ireland, the proportion of congenital deaf mutes is about 1 in 1,700 of the population, while only 1 in 12,000 has become deaf after birth. In Belgium, the proportion of the former class of deaf mutes is 1 in 2,824; of the latter, only 1 in 10,500. And it may be stated generally, that if the average of Europe without Germany, as our tables show, be 1 deaf mute in about 1,300 souls, or 769 in a million, and of these only one-fifth became deaf after birth, then the general proportion will be one child born deaf in 1,626, or 615 in a million, and one child become deaf after birth in 6,500, or 154 in a million. In our own country, on the other hand, the general proportion of congenital to accidental cases is only as five to four; which, taking as an approximate proportion of deaf mutes, 1 in 2,000, or 500 in a million, will give of children born deaf, 1 in every 3,600 nearly, or 278 in a million; and of children who become deaf by sickness or accident, 1 in every 4,500 nearly, or 222 in a million. In Europe generally, the chances of the birth of a deaf-mute child are more than twice as great as in the United States, or 615 in a million against 278 in a million; but the chances

of the loss of hearing after birth are in Europe generally much less than in the United States—to wit, 154 in a million there, and 222 in a million here; while in Ireland this proportion is only about 80 in a million. The difference is too great and too uniform to be explained by the inaccuracy of our census; and indeed a larger allowance for that inaccuracy would only increase the contrast on the side of accidental deafness, while it would not very materially diminish it on the side of congenital deafness."

To what this difference between Europe and America, in respect to the prevalence of accidental and congenital deafness, is to be ascribed, is a difficult problem to solve. Whatever the cause may be, the fact seems indisputable, that in this country not half as many children are born deaf, in a given population, as in Europe.

Some physiologists have endeavored to discover a cause for it in the mingling of the races in America, thus creating a physical constitution less liable to defects of the senses; others have suggested the peculiar temperament of the Americans, and their improved physical condition, from being less exposed to want and a rigorous climate. To solve the problem, requires a body of medical statistics such as America at present cannot produce. Even what we have are yet unpublished; but we will venture the opinion, that the last two causes assigned above are the true ones, and more particularly the last. If we had complete statistics on the subject from tropical countries, we would probably find *that both congenital and accidental deafness decreased as we approached the equator.* The ear is the most delicate organ of the body, and the most liable to injury from climatic influences. We might cite many medical authorities, and many statistical tables, in proof of the correctness of this opinion; but the subject is one which belongs rather to medicine, and to pursue it farther here would be merging our paper in a medical discussion.

That congenital deafness is one of the frequent consequences of *intermarriage of blood relations,* of cousins with cousins, is a pretty well-established fact, and should be a warning to all. Nothing is better established in human physiology than the fact of the deterioration of offspring from such intermarriages. Congenital deafness appears from four to five times as often from marriages between cousins as from marriages between persons not related.

The effect of marriages where both parties are deaf mutes has also been carefully observed, and the result appears to be, that the loss of hearing is not necessarily transmitted; that "it is much the most common for the children of deaf-mute parents to possess the faculties of which their parents were deprived." Of more than 190 of the pupils of the New-York Institution for the Blind who have been married, only two couples have deaf-mute children. Of 150 families of deaf-mute parents, pupils of the

American Asylum, only five are known to contain deaf-mute children. The same results have been observed in other American deaf-mute asylums.

The Prussian government does not permit the marriage of two deaf mutes; so that there is no opportunity there of deciding the question of hereditary deafness.

So far as present statistics, both of Europe and America, decide, it appears "that not one in a thousand of the deaf and dumb inherit their misfortune from a parent or known ancestor." It is also a statistical fact, "that the marriage of two deaf mutes is more liable to produce deaf-mute children than the marriage of a deaf mute with a hearing person, probably in the proportion of six or seven to one; still the chance is small, except in a few remarkable families where deaf-mutism seems developed in several branches as a family trait."* The same authority states generally, "that there are congenitally deaf children in about one family in every 135, where one parent is a deaf mute; and in one in 400 or 500, where neither is so afflicted. * * * * The occurrence of deafness in families is governed by no fixed law, and we can only predict its occurrence in a given family, as nearly as we could foretell *that there would more likely be a snow-storm at a given hour in January than at a given hour in April.*"

From our deaf-mute statistics it appears that in this country a large majority of the congenitally deaf have deaf-mute brothers or sisters; and of the *families* containing deaf mutes from all causes, one in six contain more than one each. Of the families containing deaf mutes from birth, making allowance for the unknown cases, probably one-third contain more than one deaf mute each.

From a large mass of data it also appears that "in Europe, except Belgium, the proportion of deaf mutes having deaf-mute brothers and sisters is only from about one-fourth to one-sixth; while in New-England, New-York and Ohio, this proportion, including in both cases members of the same families who had not been pupils, exceed one-third; and if only the congenitally deaf be taken into account, we find in this country much more than one-half of such family cases, and nowhere in Europe, so far as the documents show, except at Prague, more than about 40 per cent. It is certainly a very remarkable fact, that while we have, on the whole, a much smaller proportion of congenital deaf mutes to the population than is observed in any country of Europe, we should have a larger proportion than any European country of cases in which more than one deaf mute is found in a family. It may be explained, in part, by supposing there are

* Mr. Peet: Report to the New-York Legislature, 1854.

more children in American families, hence more chances of having more than one deaf-mute child; but this will certainly not account for there being a larger proportion of such cases in New-England than in New-York."

As it is a matter of some interest to know what proportion of families the aggregate misfortune of having three, four, or more deaf-mute children, we annex the following table, showing the numbers of such cases in different countries and institutions.

NUMBER OF FAMILIES CONTAINING DEAF MUTES.

INSTITUTIONS OR COUNTRIES.	2	3	4	5	6	7	8	9	10
New-York,	92	38	12	1	2	1	—	—	—
Hartford,	103	42	13	7	2	2	—	—	—
Ohio,	42	28	3	2	2	—	—	—	—
Philadelphia, (to 1836,)	19	7	4	2	1	—	—	—	—
Danville, Ky., (to 1836,)	12	3	1	2	—	—	—	—	—
Ireland,	287	127	33	8	3	1	1	—	—
Belgium,	147	54	14	4	—	1	—	—	—
Groningen,	42	12	2	1	—	—	—	—	—
Prague,	14	4	1	—	—	—	—	—	—
Brunswick,	8	2	2	—	—	—	—	—	—
Paris,	16	12	5	—	1	1	1	—	—
Leipsic,	13	7	1	—	—	—	—	—	—
Copenhagen,	29	9	3	—	—	—	—	—	—
Cardiganshire, Wales,	4	1	2	1	—	—	—	—	—
Yorkshire Institution, (1837,)	17	7	2	1	—	—	—	—	—
Zurich, (1828,)	19	2	1	—	—	—	—	—	—
Totals,	864	355	99	29	12	6	2	—	—
London, (select cases,)	—	8	12	8	1	2	1	—	—
Germany, do.	—	—	—	—	—	1	—	—	—
Case mentioned by Dr. Akerly in the United States,	—	—	—	—	—	—	—	—	1
Hereditary case in Kentucky,	—	—	—	—	—	—	1	—	—

From this it will be seen that two and three deaf mutes is the most common in families where there are more than one; and that Ireland is the most afflicted country of all.

Modern deaf-mute statistics have established the fact, so constantly denied, by even the greatest of the ancient philosophers, that the deaf and dumb are naturally equal to other persons in their intellectual faculties and manifestations, and that these faculties may be developed by means of artificial language, or by natural and descriptive signs, accompanied by writing.

It is not a little strange, that the ancients, and particularly the Romans, who so much excelled the moderns in pantomime, should, nevertheless, have generally believed that the deaf and dumb were totally incapable of instruction. We are told that "a king from the borders of the Euxine, seeing a pantomime performer at Rome, begged him of Nero, to be used as an interpreter with the nations in his neighborhood at home."* From the great perfec-

* American Review, vol. 3, p. 505.

tion of the pantomimic art among the Romans, it seems almost incredible that it did not suggest to them its application to the instruction of the deaf and dumb. Some of the ancient deaf mutes, in spite of the lines of Lucretius, expressing undoubtedly the popular belief, that

> "To instruct the deaf no art could ever reach,
> No care improve them, and no wisdom teach,"

must have profited largely from witnessing the pantomimes in the Roman theatres. Pliny mentions the deaf mute "Quintus Pedius, grandson to that Consul, Quintus Pedius, who was named in Cæsar's will co-heir with Augustus,"* as having made great proficiency in the art of painting; which shows that the Romans might have devised means of instruction for that unfortunate class, if Roman civilization had been sufficiently humane.

Aristotle and Pliny, indeed, taught that dumbness is a consequence of deafness; but, nevertheless, most of the ancient philosophers believed that dumbness was not a consequence of deafness, but a defect of the lingual and auditory nerves. Pliny believed deafness and dumbness curable, and proposes remedies.† The German schools for the deaf and dumb, as is well known, teach all of their deaf mutes to articulate, and they are the only schools that do.

The northern nations of Europe seem to have been more severe and unfeeling towards the deaf and dumb than the Romans. They not only supposed them naturally deficient in intellect, but that they were a semi-demoniacal race of beings. The earlier codes of almost every nation in Europe imposed upon them severe civil disabilities, depriving them of the rights of inheritance, and requiring a dispensation from the Pope to allow them to marry. The laws of some ancient nations required that children, as soon as discovered to be deaf and dumb, be put to death.

St. Augustine, of the 4th century, believed that deaf mutes were incapable of religious belief; for in commenting upon the passage in the New Testament, (Romans x., ch. 17,) "Faith comes by hearing, and hearing by the word of God," he remarks that deafness from birth makes faith impossible, since he who is born deaf, can neither hear the word nor learn to read it. His words are: "*Quod vitium, ipsum impedit fidem; nam surdus natu litteras quibus lectis fidem concipiat, discere non potest.*"

This opinion of St. Augustine, and of others of the Christian Fathers, was generally entertained by theologians down to the middle of the last century; but still there were a few pious priests who entertained the contrary opinion, and actually pre-

* Hist. Nat., Lib. xxv., chap. 4.
† See Celsus.

pared young deaf mutes for the first communion, and instructed them in all the doctrines of the Church by the language of signs.

The first mention we meet with of the capacity of deaf mutes to receive instruction since the time of Augustus—when, as Pliny informs us, the orator Messole and the Emperor himself thought that Quintus Pedius could be taught painting—is in the writings of Rodolphus Agricola, of Groningen, in the 15th century. In his posthumous work, *De Inventione Dialecticæ*, he states that he had seen a deaf mute, from infancy, who could read and write. He does not state the origin of the art of instructing the deaf and dumb, but it was understood long before his time. Dactylology, or the art of spelling out words with the fingers, was well known hundreds of years before men ever thought of instructing the deaf and dumb. The Greeks practised it from a very early period, and our present manual alphabet is derived from them. Pliny mentions, in his 34th book, an ancient statue of Janus, the hands of which were sculptured in the positions representing the numbers, three hundred fifty and five, which was the number of days in Numa's lunar year. Dactylology, indeed, was known to, and practised by, the Hebrews; for we read in Proverbs, chap. vi., verse 13: "He winketh with his eyes, *he speaketh with his feet, he teacheth with his fingers.*" It is certain that the Greeks and Romans had modes of spelling words on their fingers, some of which have been handed down to us by Bede, who gives three distinct manual alphabets. The Romans used not only their hands and fingers, but all parts of the body. They denoted each letter of the Roman alphabet by touching some part of the body the name of which began with that letter. Thus, A would be expressed by touching the ear, *aurem.* To spell out the word *Utica*, for instance, they would touch successively *umbilicus, tibia, inguen, caput*, and *aurem.*

This mode of spelling words on the body must have been a most comical literary exercise, worthy of a place in our modern systems of gymnastics. It was making use of a true *alphabet gymnastique.*

Not long after the death of Agricola, the learned Jerome Cardon, of the University of Pavia, promulgated the principles of the art of instructing the deaf and dumb; and the first teacher of deaf mutes is said to have been Pedro de Ponce, a monk of the order of St. Benedict. He died in 1584. John Paul Bonet, also a Spaniard, published a work on the subject about forty years after the death of Ponce. It was entitled, *Reduccion de las Lettres, y Arte para enseñar, á hablar los Mudos.* It was from this work that De l'Epée, some years afterwards, derived all he knew of the art.

In England, John Bulwar was the first to introduce the art.

After him came Wallis, who taught the deaf mutes to articulate. In 1680, George Dolgarno published a treatise on the subject, of considerable merit, entitled *Didascalocophus*. About the commencement of the 18th century, the art began to attract the attention of the learned of Germany, Kerger commencing the work of instruction at Liegnitz, in Silesia. He used drawing, writing, pantomime and articulation. France commenced later than the other nations of Europe; indeed, it long opposed the progress of the art, such was the strength of prejudice.

It would be tedious to pursue this branch of our subject farther; besides, our space is limited. The following table shows the number of institutions for the deaf and dumb in Europe, in 1840.

Countries.	No. of Deaf and Dumb.	No. of Institutions.	No. of Pupils.	No. received Annually.
Portugal	2,407	1	20	—
Spain,	7,255	1	30	—
France,	20,189	28	798	159
Italy	12,618	5	147	29
Switzerland	3,976	5	80	16
Austria	16,684	6	197	39
Prussia	8,223	18	314	62
Other German States	8,283	28	410	81
Hanover	946	1	10	2
Holland and Belgium	2,164	5	249	50
Denmark	1,260	2	190	38
Sweden and Norway	2,397	1	40	8
Russia	27,834	2	111	22
United Kingdom	14,328	12	745	149
Totals	128,566	115	3,341	655

The above table is taken from the *Cyclopædia of the Society for the Diffusion of Useful Knowledge.*

From all that we have thus far stated, it appears that we are indebted to Spain for the art of teaching the deaf and dumb to speak; but, like almost every other good thing that has sprung up in that unfortunate country, it soon fell into disuse there, while other countries availed themselves of it, and improved it. Spain now, with its 7,000 deaf mutes, has only one school for them. Spain and Spanish America, as Mr. H. P. Peet justly observes, are, of all Christian countries, those in which the least has been done for the deaf and dumb. The single existing Spanish institution, at Madrid, has had a long and doubtful struggle with indifference and neglect, and is probably the poorest school in Europe.

We would gladly extend this paper farther, but space will not permit us. For many of the statistical facts contained in it, we must acknowledge our indebtedness to the Annual Reports of Mr. Harvey P. Peet, President of the New-York Institution for the Instruction of the Deaf and Dumb. It is greatly to be

regretted that the statistics of deaf-mute education in this country are not more complete; and it is to be hoped that the marshals who take the next census will be required to be more specific in their enumerations regarding this subject.

Art. II.—THE COTTON-WORM—ITS CHARACTER, HABITS, ETC.

[The following paper was prepared for the Review by a Southern planter, who has given great attention to the subject he discusses, and has presented some views which may have interest and instruction throughout the cotton region. In any case, the Editor trusts that it will pave the way for other papers upon the same subject, to which the pages of the Review are ever open.—Ed.]

I have for several years past been paying some attention to the various insects which prey upon our cotton-plant, and have made some experiments upon them. I will here give you what I know on the subject of the cotton boll-worm.

This worm is sometimes called the boll-worm, the pierce-worm, and the fleer-worm; but they are only different names for the same worm. It is called the fleer-worm, because, when it attacks a square or small boll, the calyx or flower-cup turns yellow or fades and "fleers" open before it drops, without the opening of the carolla or bloom; hence it produces a mock or false opening of the bloom: the pierce-worm, because it was supposed it pierced into the bloom buds and small bolls instead of eating its way into them; and the boll-worm, because, when it gets of sufficient size, it preys principally upon the cotton bolls.

I have gathered the cotton bolls in the field with the worm in them, and have put them in glass jars and furnished them with fresh bolls as often as was necessary, until they became grown. The change it undergoes in completing a circle or generation is from the worm to the chrysalis; from the chrysalis to the fly or moth; the fly deposits the eggs; and lastly, from the egg hatches the larva or young worm; thus, the circle constituting a generation becomes completed. From my numerous experiments and frequent examinations of this insect, I had the satisfaction of seeing the worm actually metamorphose itself into the chrysalis state, have seen the moth deposit the egg, and have seen the eggs, when in a state of hatching out, and have assisted the larva or young worm in extricating itself from the egg envelope. Thus I have seen the circle completed with my naked eyes, with the exception of the pupa, moth or fly leaving the chrysalis; and am disposed to believe, that this change of bursting the chrysalis and the escape of the fly is quickly done and mostly at night, though I do not believe essentially or exclusively at night.

I gathered the worms of all sizes and ages as I found them in the cotton-field, and placed them in glass jars on my mantel-piece, with the bolls I found them in, and had the opportunity of examining and watching them just as often and as much as I thought was necessary, without any trouble or inconvenience whatever, and at leisure moments, without any loss of time from other occupations; and in my frequent examinations I had the opportunity and satisfaction of seeing all the changes with the single one exception—and this worm may be raised as easily in the house, from generation to generation, as the silk-worm, with the same care and attention.

In gathering the worm for experiment, it should be suffered to remain in the boll in which it is found as long as it is disposed, or as long as the boll furnishes a sufficiency of suitable nutrition for it. This, however, is not

very material, as it will take hold of a fresh boll and eat its way into it very readily, when placed within the calyx or leaf of the boll and left unmolested. I have taken it out of the cotton bolls in the field and brought it home in a little box, and on getting home, have put it in contact with a fresh boll, and found it exhibited no hesitation in taking hold of the boll and eating its way into it quickly. In supplying it with a fresh boll, the age of the boll should correspond with the age and size of the caterpillar-worm; at least, the boll should be so tender as to be easily eaten into.

When it gets to be about fifteen or twenty days old, it is metamorphosed into the chrysalis state. As to the precise time it requires to get its growth I cannot be certain, as those I experimented on were of different ages and sizes when gathered, and I did not trouble myself to raise any from the egg, which may be readily done with a little pains and caution, in not more than twelve or fifteen, or at most twenty days, under favorable circumstances. When the worm obtains its full growth it stops feeding, becomes torpid and inactive; contracts itself, and in a few days is metamorphosed into the chrysalis, without any previous webbing. This process commences by the separation of the skin, or a slit on the back, a little below the head or neck, and by an alternate convulsive motion and rest. In about five or six minutes, or less, it works itself out, by gradually working the old skin down to, and off at its lower or smaller end. When this change takes place the chrysalis is white, but it soon assumes a lively brown color, I suppose produced by the contact of the atmosphere. I am inclined to believe that this is the only shedding of skin it undergoes during its whole worm state; at least, it is the only one I discovered in all my experiments. In this state it takes no food and has nothing peculiar about it over that of the chrysalis, of any other worm of its size, other than that it is of a livelier and a brighter brown than the army-worm.

The boll is unlike the army-worm or caterpillar in several respects. The army is a day worm, the boll is more of a night worm. The former feeds and seeks its food in day as well as night, and will migrate from place to place, from stock to stock, from limb to limb, from leaf to leaf, and even from field to field, by day, in pursuit of its food. It consumes nearly the whole of its time feeding, and feeds exclusively on the cotton leaf, except, when the cotton leaves become exhausted, and to avoid starvation, it is compelled to eat the young tender cotton bolls, the whole boll, the burr with its contents, and even the bark and the tender twigs of the cotton stocks. The boll-worm seeks its food by night only, and is truly a "cut-worm," as its habits prove. It retires to the ground to conceal itself during the day, unless it can remain concealed and be excluded completely from the light and heat of the sun, where its food is, being deeply burrowed, perhaps, into a cotton-boll, or into the tip end of the ear of green corn. When thus situated, it will feed as well by day as by night. Its food is bloom buds, the contents of cotton-bolls, or the tender ends of twigs of the cotton-plant or of other plants before they become woody, whenever it cannot obtain the cotton-boll, but never leaves of any description. It dislikes the light or heat of the sun, and never stirs from its concealed place of a bright sunny day, or even of a cloudy day, unless it is disturbed in its concealment.

The boll-worm is a large, rather short, fat, and a bright worm, when full grown, with white and red or yellow stripes. The army-worm is a long, slim worm, with white and black stripes. The general complexion of both vary somewhat among their own kind, probably owing to the color of the food they may have been feeding on. Some among the army-worm are blackish, and others green; some boll-worms are deeper red or yellow than others. The number of stripes does not vary in either; the variation is only in the different grades of color. The boll-worm coils and falls about inactive when handled; the army-worm, on the other hand, never coils, but lies

stretched full length, and writhes and bounds. This is only a general description given from memory, as I have no sample before me. Their excrement, also, differs widely from each other. That of the boll-worm is soft, moist, consistent and light-colored; at first, somewhat of the color of its food, but the atmosphere soon changes it to a brown: that of the army-worm is black or dark green, dry, hard lumps, or "sybala," resembling rather coarse gunpowder grains, viewed at a short distance.

The army-worm will web or form a kind of house or cocoon, and suspend itself above ground to twigs, leaves, grass, weeds, &c., for its metamorphosis into the chrysalis state; but I have never known the boll-worm to spin an inch of web during all my experiments with it. It may possibly let itself down to the ground, or from twig to twig, by a web, as some worms do which do not web before their metamorphosis; but I have never seen the boll-worm even do this. The boll-worm returns to the ground to metamorphose itself into the chrysalis state. Were this not the case, we might find their chrysalis in the cotton-bolls, or elsewhere, above ground, which I have never succeeded in doing.

It continues in the chrysalis some eight or ten days, all things being favorable to the continuation of its metamorphosis, or the continuation of the circle of its generation. If the worm is fed well in its proper season, and attains to a full size before changing to the chrysalis, the fly or moth bursts the chrysalis, and comes out of full size; but if the worm has been starved or badly fed, or compelled, by the lateness of the season, to hasten its change before it gets its full growth, the fly comes out feeble and diminutive; as I have noticed in my observations, that the cool nights or early frost in the fall season would urge the boll-worm to change its form before it seemed to be fully grown, as well as to force the army-worm to web up before it had its full growth.

The general description of the boll-worm fly is—color, light cream; body, thick, coarse, rough, with a thick down; neck and head, short and bowed, with large eyes. The army-worm fly is a neater fly; color, rich, ferruginous and variegated; body, smaller than the boll-worm fly; more active on its wings; eyes smaller; head more projecting from the body. Each have four incumbent wings.

In a few days after the fly comes out, it commences depositing its eggs. I have seen it stated in some publications, that it is supposed that each of these flies lays or deposits hundreds and thousands of eggs. This is a mistake. None of those I had confined deposited more than twelve or fifteen eggs; and under the most favorable circumstances, I doubt very much whether any would deposit exceeding thirty eggs. I will also state here, that the flies I had confined were not fed, and I believe that they should have been, for them to have done as well as if at liberty. This possibly could have been done easily, by suspending a fresh cotton leaf, moistened by the morning dew, into the jar containing them, every day, or oftener, if necessary. I believe they require nourishment, and they obtain that nourishment by suction, not as the large, gaudy spring and summer butterflies do, mostly from flowers, but from the moisture and effluvia that emanate from the leaves and plants of succulent vegetations. I have never seen a boll fly or an army-fly sucking at a bloom of any description whatever. Yet this supposition may be an error, as they are a night-swarming fly, and may feed only at night, and may obtain their food only from blooms at that time; but, to judge from their shape and appearance, I do not think that they obtain any nourishment from blooms. When at large or at liberty, where it may select suitable food, it certainly would live a few days longer, and would deposit some more eggs. But if each fly deposited as many eggs as some have supposed, taking into consideration that they complete about three generations during the season, it is reasonable to suppose they would

become so numerous in a favorable time, that not a boll of cotton would escape their ravages throughout the whole cotton region, and they would prove a far worse plague than any that infested Egypt.

At the commencement of my experiments, I had the flies in jars singly, and discovered that they deposited no eggs. Supposing them of different sexes, and that they required association to deposit eggs, I put several together in the same jar, and then they soon commenced depositing abundantly. The male is a smaller fly than the female, and can be readily distinguished from it among those which have been well matured.

This fly seems to differ in this respect, that of depositing eggs, from the army or caterpillar-fly. I have tried a variety of ways to obtain the egg from the army or caterpillar-fly, but have completely failed. I have had a great many confined in jars at the same time, and at different times, from when they left the chrysalis until they died. I have tried them single, and have had several together in the same jar, without obtaining eggs. Neither am I satisfied that they give birth to a living progeny. On the completion of every circle or generation, the boll-worm comes out the same; the army-worm may not, but may require several small circles, as it were, to complete one great circle or generation. It is certain, when they make their appearance, or when they are prevalent, they have two circles or generations of the same kind for that season.

The boll-worm hibernates here about the cotton-fields in which it is raised, and that in the ground in the chrysalis state. One chrysalis remained in the jar on my mantel-piece during the whole winter, and the pupa did not leave the chrysalis until the last of the following May, demonstrating conclusively that it hibernates as chrysalis; and if the chrysalis was subjected to a continued frosty temperature, it is possible it might be kept perfectly sound for several years in that state. As to hibernating in the ground, there is no doubt, and it may be easily demonstrated by gathering a great many chrysalis from the ground during the winter, and preserving them until the fly comes out. I have obtained the chrysalis thus in the month of March, and obtained a similar fly or moth to those I obtained from the worm. It is reasonable to suppose that all insects which do not web before changing into the chrysalis, hibernate in the ground; and all those that web, or form something like a house or cocoon for its metamorphosis, as the army-worm or silk-worm, hibernate as egg or as chrysalis, by suspending themselves to twigs, grass, weeds, or in crevices, &c. The boll-worm, of course, goes into the ground while a worm, and there changes into the chrysalis. The boll-worm may possibly, as moth or fly, hibernate above ground, where it may keep dry in crevices, cracks of old trees, old houses, &c. I am under the impression that I have caught flies or moths after the frost of winter had commenced; and if resemblance is any proof of identity, they were identically the same kind of fly. They, like bats, of a warm winter's evening, become animated, leave their holes or hibernating places, and fly about. The supposition of their hibernating as fly or moth is a mere hypothesis, without evidence based on any positive facts. Whether they hibernate as egg or not, I have no evidence. The silk-worm hibernates as egg; but there is no complete analogy. The silk-worm webs or forms a cocoon; the boll-worm does not. The silk-worm feeds on leaves; the boll-worm never does. There is no doubt that the principal mode of hibernating, if not the exclusive one, is as chrysalis.

The boll-worm is annual; the army-worm is biennial or irregular. We have the boll-worm more or less every year; and the only reason they are not equally numerous every year is only because all seasons are not equally favorable to their production. In whatever state they may be in when the season closes, or the frost of fall sets in, in that state they must either hibernate or perish, whether it be as chrysalis, as moth, or egg. Generally, there

is a hasty preparation with the immature to hibernate as chrysalis, and there is not much disposition in the pupa to leave the chrysalis after the cool nights commence in the fall: thus nearly all, if not all, become prepared to hibernate as chrysalis. When its hibernation commences, its preservation, from the month of October or November until about the following June, is dependent more on the mercy of chance than on any particular ability within itself for its preservation. Notwithstanding their dependence on mere chance for their preservation, while enduring the severities of the winter, and risking all the various accidental causes that may tend to destroy them for seven or eight months of the year while in this dormant state, there will some escape destruction, and make their appearance about the first of June as fly or moth; and in a few days afterwards, they commence depositing their eggs rather promiscuously, though not wholly destitute of an instinct. We admit that all animals have some peculiar instinct; and it is supposed by some that this moth deposits its eggs mostly, or only, on the buds of the cotton limbs; and it has been recommended to clip all the tip ends of the limbs, and destroy them, and thus destroy the eggs, as a remedy against the ravages of the insect; but I have not thought, from my observations, that they exhibited so much instinct as to make this remedy a judicious one: and if they did, the remedy might prove more injurious than the evil. I have seen those I had confined deposit eggs in the day; but it is possible, when at liberty, they may deposit their eggs mostly at night, and may then exhibit a good deal of instinct in the operation. They lay up generally in the day, and stir at night, or mostly between sunset and dark. About the first of June, the first crop of eggs is deposited, or, rather, the first crop of flies deposit their eggs; and in due time, after a certain age, about seven or eight days, they are hatched out by the influence of the atmosphere alone; and if the summer should be unfavorable to their production, they continue to be rare the whole summer, and the damage to the cotton crop is but slight.

When we have a dry summer, the dews of night are light, the atmosphere dry, the sun hot, and the vegetation generally full of dust, as well as the atmosphere. Now, when the egg hatches at such a time, the dust tends to absorb the little moisture that is around the little larva, and the heat of the sun dries it up: thus it becomes destroyed before it acquires strength enough to protect itself. I am of the opinion that the most of them perish immediately on hatching out, or in the egg, and that is the reason they are not numerous. Some will escape destruction, and grow up to maturity, even during the most unfavorable seasons; but it is because some will, either from accident or from instinct, be dropped in favorable places.

But should the summer be attended with frequent showers during the day, with heavy dews at night, and a continuous damp atmosphere, with comparatively little sunshine in the day, and the cotton-plant, as well as the atmosphere, be washed clean of dust by the frequent showers, the larva, on hatching out, and meeting this favorable condition of things, instead of perishing, grows rapidly. As this state of the atmosphere is both favorable to the hatching of the egg as well as the growth of the larva, a few flies, in the beginning of summer, may soon stock a cotton-field with a numerous supply of the worm, from the quick succession of its generation.

Knowing that they hibernate here, and supposing that many must perish by freezing in a cold winter, I concluded it reasonable that they would not be so numerous the season succeeding. The winter of 1851-2 was very cold, freezing nearly all the time, with very little rain; and the summer of 1852 was very wet, and the boll-worm was as numerous and as destructive to the cotton crop in our section as ever. It is dependent on the condition of the summer season alone whether they will be numerous or not; and probably a warm winter may be more favorable to their destruction

than a cold one, as it is supposed that insects hibernating in the ground devour each other during their hibernation, and a warm winter may admit of more free action amongst them in this respect.

It is possible they live and grow, when first hatched out, on the same principle that a green twig will vegetate for a while, when cut and stuck in the moist earth or water; or on the principle that seems to be common with the young of all animals, that of growing and acquiring strength for a while from a kind of nutrition that is appropriated from within itself, before taking any nutrition from without. So it may be with the young of this fly; and though the moisture may serve actually as a nutrition, by the absorption or the suction of it, it is certain that it serves essentially as a protection against circumstances that would prove incompatible with its continued existence and growth, such as the hot sun, dry atmosphere, dust, &c.

As soon as it acquires strength to migrate, it commences feeding on the first bud, it matters not whether it is a cotton square or a limb bud; but as soon as it gets sufficiently strong to be able to pursue and select its own food, it selects nothing but the squares or bloom buds if it is among cotton-plants; and as it grows larger and stronger it attacks the bolls, and advances in this way, feeding on bolls corresponding to its own size, until it arrives at its maturity. Thus the younger the worm is after it commences seeking its food, the more destructive it is to the cotton fruit, as it attacks the squares, eats its way into them, and eats nothing but the stile or germ, and then leaves it for another. Thus it may destroy a great many squares in a very short time. Every square or small boll it eats into soon turns yellow, "flurs" open and drops; but before this takes place the worm has left it, and perhaps has attacked several others. This is one of the reasons why it is so hard to find, when hunted up. The nearer it becomes grown, or to maturity, the less injury it does to the cotton crop, as it generally eats into the larger bolls only; and, notwithstanding it may eat into one side of a grown boll, it does not always wither or rot, but continues to grow and keeps moist and green on the opposite side, thus furnishing suitable food for some time. As it is not disposed to stir much, or to leave one boll for another as long as the boll furnishes it with suitable food, unless it is disturbed, it does comparatively little damage to the cotton before i arrives to maturity. I think I have known it, in some cases, to get nearly one-fourth, or even one-third of its latter growth in one boll of cotton. Whenever it does leave a boll before devouring its contents at this stage of its existence, it is generally owing to some disturbance, or from being too much crowded by its own excrement; for the nearer it comes to maturity the more inactive it becomes, and the less disposed it is to stir. It eats nothing of the boll but the immature lint and seed, unless when eating into the boll.

Judging from analogy, I supposed it to be more than probable the worm that preys on the ends of the ears of our green corn, and the buds or tassels before they come out, was the same kind or species so destructive to the cotton, and that it would be equally as destructive to the corn crops were it not for the fact that the corn matures with the first crop or generation of the worm, and before it becomes numerous by a succession of generations. This supposition proved to be correct on a further investigation. I have obtained the worm from the ears of the green corn, and have fed it on the cotton bolls, and it would soon take on the same physical complexions and features, in every particular, of those which were obtained from the cotton. When it was first applied to the cotton bolls, it did not seem to understand very well how to eat its way into the bolls; but by cutting a little hole at first into the bolls, it soon commenced to feed on the cotton, and thrived as well as on the green corn, or as the boll-worm itself did. Corn that matures in the fall, or late in the summer, is often very se-

riously injured by this worm. It prefers to obtain its food from the corn rather than small cotton on sandy land, or is better protected and more secure from destruction. The shuck of the green corn protects it better from the light and the heat of the sun than small cotton on sandy land. The heat of the sun, and the obstructions of a sandy soil, unless it is always compacted by rains, to the burrowings of this insect, are reasons why the small cotton on sandy soils is hardly ever injured much by the ravages of this worm; while it finds a comfortable and safe nidus and plenty of food in the ends of the corn ears, where it prospers and does well.

As to the remedies to be used against the ravages of the boll-worm, I have nothing original to propose. I have seen a variety of plans or remedies recommended, and have tried some of them, but they are only palliatives and precautionary steps, such as farmers always or generally practise to avoid the ravages of birds, squirrels, and other enemies on their crops, where there is no expectation of extermination. However, I will give those which have been recommended, with the opinion that, should all the planters use or adopt them unitedly, and persevere in them with an equal desire to destroy the insects of the cotton-fields as they use and exhibit in destroying the grass, the damages from the boll-worm or the army-worm would not often prove serious. The following are the means recommended.

1st. To permit pigs to run at large in the cotton-fields has been recommended; and I believe this is beneficial in several respects, so much so that I suffer as many of them to run in the cotton as will, and even encourage them to do so. They do the cotton no injury, but their superficial rootings often prove beneficial, and there is no doubt they destroy a great many of all kinds of insects that infest the fields and prey on the cotton-plant. They not only destroy every straggling worm they come upon, but they destroy a great many of the flies that become the least entangled in weeds, grass, &c. The fly is very wild, but rather clumsy in flying. Many of them nestle among weeds and in the grass during the day, and in rising to fly are easily caught and destroyed by pigs, when the least entangled in weeds or grass. Pigs delight to frequent and linger about stagnant water and low wet places in a field, the very places where the moth of this worm delights to stay and deposit its eggs. The fly being wild, dislikes to be disturbed, and will not stay where it is likely to be. Every cotton-planter, where the boll-worm is common, probably has noticed that either side of the paths and roads through a cotton-field is not injured so badly by the worm as further off, notwithstanding it may be numerous and destructive in every other place. This is owing to the fly being frightened off by persons frequently passing along these roads. The daily rambles of the pigs in the field keep the moth more or less disturbed; and if there is an adjoining field where they can remain undisturbed, they will soon be more numerous there. I have a neighbor whose farm is separated only by a partition fence, who is scrupulously particular in not letting a hog of any description run in his field, and invariably when the worm is bad his cotton is the most damaged. Another advantage is, the pigs do well without much attention or feeding. In the fall, when the cotton is open, they knock out and destroy very little in their rambles through it, not near so much as one would suppose who has not noticed them in their rambles. Large hogs do not do so well as pigs, as they often injure the cotton-plant by their deep rootings, and they cannot get through the cotton so well without breaking down more or less of the limbs and stocks, owing to their size and strength, and they sometimes eat the cotton bolls too much. Another advantage in this remedy is, it requires no labor or trouble from the planter, which is a great desideratum in a wet season, when the worm is worst, as well as the grass and weeds. This is one reason why I have placed the remedy first.

2d. White plates with molasses in them, placed about in the cotton-fields on stands two or three feet above the ground, are highly valued as a preventive by some, and if they are properly attended to, they undoubtedly will ensnare and destroy a great many of all kinds of night-swarming flies. They are attracted by the reflection of the white rim of the plate, and they are caught, held, and destroyed by the viscidness of the molasses, on the least touch of it. To succeed well with this remedy, the plates should be washed clean at least every two or three days, and fresh molasses added to them. When the rim of the plates becomes dimmed by soil, it fails to attract the fly, and the molasses from evaporation becomes too viscid, or stiff, or thick, to catch them readily when striking it; and this will certainly follow, if they are not attended to. These plates may be left on their stands day and night, as long as it may be necessary to continue them, but should be covered with something before every rain, to keep the water out, and be uncovered before night. Although the remedy is attended with a good deal of trouble, labor, and some expense, I have no doubt that, should it be commenced in time and persisted in properly, it will doubly pay in the amount of cotton saved, when the worms are numerous. There are few planters who are willing to take the trouble and spare the time to attend to them properly, for the benefit they may hope to derive. The plates may be many or few, but of course the more there are placed about in the field, the more flies will be ensnared. I have tried this remedy, and can testify that when the moth is numerous a great many of all kinds may be destroyed. I have noticed that the first night after washing the plates and renewing the molasses, more flies were caught than the second or any other night until the next renewal. Some suppose that the fly is attracted by the smell of the molasses and a desire to feed on it, and is caught; but I rather think, from experience, that they are attracted by the reflection of the rim of the plate.

3d. Large blazing fires on stands in the cotton-fields is another remedy recommended to be used against this moth The light of the fire attracts them, they fly into the fire and are destroyed. Any person of ordinary observation knows that all night-swarming flies are attracted more or less by light. Large blazing fires on stands do not succeed so well in destroying them, as moderate fires made on the ground in some rather open place, or where the cotton is not too large for it to be seen. A moderate light truly attracts them, but I believe a large blazing fire blinds and confuses them in such a way that they are as apt to fly from the fire as to it; and I believe, furthermore, that a great many, in making for the fire, are repelled by the heat before they get into it, and escape destruction. I have tried this remedy, and have remained in my cotton-field after dark, to watch the effects of the fire on these flies. I did not see as many destroyed as I expected, when I took into consideration the quantity I knew to be in the field. The most of those I saw approaching the fire seemed to be repelled or diverged off on nearing it; or they would rebound high above it, and escape destruction. On seeing this, I came to the conclusion that the heat of the large fires extended too far around, and that they felt it, and turned off before being near enough to be destroyed.

Might not a glass lantern be constructed in such a way, with wire meshes around and about it, as to entrap and destroy the most of those flies striking it? They seem to be attracted more by a candle-light than by any other, as experience has shown.

4th. Suspending three or four clean white linen or cotton flags, of about a yard square, for each acre of cotton, about three or four feet above the cotton, is another remedy, highly recommended for the destruction of the caterpillar in the cotton-fields. The object here sought is to destroy the larva instead of the fly: supposing that the moth admires light and white

colors, it will alight on these white flags from fancy, be contented there, and deposit or lay its eggs on them, and when the eggs hatch, the young worm or larva finding nothing to subsist upon, and not being able to seek its food, perishes from the effects of starvation and the hot sun.

I can say nothing from personal experience for or against this remedy, as I have not tried it, and know no person who has. I have seen it recommended by a gentleman from Louisiana, with apparently a good deal of confidence; and if it is an effectual remedy, it is a valuable discovery, as it gives the planter little or no trouble after the flags are put up, (unless when they should be accidentally blown or thrown down, or require washing,) which is essential in any remedy or plan to induce farmers to adopt it.

5th. *Rotation of Crops.*—This has been known, and recommended to farmers by agriculturists, almost since time immemorial, not only as a preventive against the various insects that prey on the different kinds of productions of the soil, but as a system for the improvement of their lands, and an increase in the productions of their crops. It is a difficult matter to practise a proper system of rotation in this country, as few persons have their farms properly laid off or divided, or a sufficiency of open lands for complete rotation. But it should be adopted as much as possible, with a view to the profits derived from all three of these considerations. Insects breed and hibernate most generally where they receive their food, and to plant the same crop on the same land for many years in succession, the insects which prey on that peculiar crop will become sufficiently numerous to affect the yield of the crop materially. This is well known to the planter of the most ordinary observation. Clear or open a new ground field in the forest, some distance from any other field, and it may be planted for several years in cotton, before the insects will become sufficiently numerous to injure it much; it matters not what the seasons may be, whether wet or dry, showing conclusively the want of a stock or germ to originate the insect, or that it requires several years' cultivation to fit the soil to generate the germ of the various kinds of field insects. This is one among other reasons that virgin soils, or new ground, are so celebrated for the production of cotton.

The foregoing remedies are equally applicable against the army-worm as the boll-worm, and against all night-swarming insects, as there is nothing specific in either, but all are based on general principles.

Art. III.—ST. LOUIS, MEMPHIS, AND NEW-ORLEANS RAILROAD.*

When the Mississippi Valley Railroad, to connect the city of New-Orleans with the Falls of St. Anthony, was projected, in October, 1852, we presented the claims of three routes, south of Missouri, viz.: the Little Rock, the Memphis, and the Helena route.

The country from Missouri to Memphis, and from Missouri to Helena, had been unexplored by railroad engineers, and a merely preliminary survey had been made by the government of the United States from St. Louis to Fulton via Little Rock.

We, however, obtained information of the peculiarity of Crowley's Ridge, extending from Missouri to Helena, 150 miles, with an almost unbroken, firm and high surface on its side, above the

* From *Western Journal and Civilian.*

swamp and overflowed lands with which it was surrounded. Helena was also in a nearly direct line from St. Louis to New-Orleans. The Arkansas country, on each side of Crowley's Ridge, abounded with unreclaimed swamp and overflowed lands. The Helena route was considered shortest and cheapest, and therefore preferred.

The Memphis route, it was thought, might be established by the construction of that portion of the Memphis and Little Rock Railroad from the Mississippi to the St. Francis, 40 miles, across the swamp; and although it was considered impracticable to build a road from Old Indian Ford to Memphis, through the lakes, swamps, &c., 140 miles, on the east side of the St. Francis, yet it was then declared that "Memphis might hold out inducements to make its route preferable" to the Helena route.

In regard to the Little Rock route, it was considered that "advantages might be gained by and from Little Rock and the country along its route, to produce a great preponderance in its favor," although the Little Rock route was estimated 95 miles longer than the Memphis route. The Little Rock route has been earnestly and uniformly advocated by us; and although violently opposed by a strong political party in Arkansas, as a "visionary scheme too wild for a respectable maniac," and "worse than a man's trying to hold himself out at arm's length," this scheme has become more respectable than its adversaries, and stronger than their strength, and is progressing with reasonable speed, by the impetus given to it by its friends, combined with its own intrinsic merits.

We will now present the claims of the Memphis route, together with newly-discovered evidence in its favor, hoping soon to obtain yet further evidence of a commercial character, which will place this route on a commanding position.

The final survey of the railroad from St. Louis to the Iron Mountain reduces the distance to 80 miles from Hazel Street, on the route which is now located in every part, which is under contract, on which 350 men are now working, and $35,000 have been paid to the contractors for work done to 1st June, 1854.

The extension of the Iron Mountain road towards Arkansas reaches the Swamp District, near Indian Ford, 150 miles from St. Louis. The route of this extension was found to be far more practicable than its warmest friends anticipated, the grades being easier, and the cost averaging $10,000 per mile less than that of the portion between the Mountain and St. Louis; whereas, from the estimates of Barney's survey, it was apprehended that the relative cost would be much greater below than above the Mountain. Considering the mountainous character of the country, this line of 70 miles from the Mountain to the Ford is remarkably straight. It is the only good line that could be obtained

south of the Mountain towards Arkansas, and, furthermore, is in the direction of Memphis.

The Indian Ford may be considered a fixed point in the Mississippi Valley Railroad, which ever way the road may be extended towards the South; and this point, though on the verge of the Swamp District, is destined soon to rise, and become a point of great distinction. Therefore, it may be well to designate it now with reasonable distinctness. Old Indian Ford is on the St. Francis river, near, though south of, the junction of Wayne, Butler and Stoddard Counties. It is equidistant from Cairo, Hickman, and the Arkansas line, in Grand Prairie, Dunklin County, being about 60 miles on an air line from each. It is also nearly equidistant from New-Madrid and from Point Pleasant on an air line, being about 45 miles from each; and it is just 30 miles from the Arkansas line, in Ripley County, where the best route is found along the northwestern border of the Swamp Region, in the direction of Little Rock and Fulton, in Arkansas. Three routes have already been surveyed by the Iron Mountain Company, radiating from Old Indian Ford, one to Cairo, one to the Arkansas line, in Ripley County, and one to New-Madrid; the last-mentioned extending to Point Pleasant. A great variety of other experimental surveys were made throughout the Swamp Region; and it is believed, from indications discovered in these discursive experimental surveys, that one of the most practicable routes from Old Indian Ford towards New-Orleans would be almost in a straight line in that direction; that is, on the east side of the St. Francis river, through Stoddard and Dunklin Counties to the Arkansas line, in Grand Prairie, which is also in a direct line towards Memphis.

A powerful argument in behalf of this route in Missouri might be built up, based on the reasonable presumption, that a railroad-bed, constructed along the eastern shore of the St. Francis, in Stoddard and Dunklin Counties, would be the best embankment to prevent the occasional overflow of this river in these counties; and further, that such an embankment may be essential to reclaim the swamp lands in these and the adjoining counties of New-Madrid and Pemisco, as also of a large part of the country in Arkansas, east of the St. Francis. This branch of this subject is well worthy the careful consideration of the Swamp Land Commissioners of Arkansas, as also of the above-mentioned swamp counties of Missouri.

That the probable feasibility of this route may be still more highly appreciated, and that the ignorant prejudice against building a railroad through the Swamp District may be more thoroughly advised and fairly enlightened, it is proper to state, and it should not be forgotten, that while the cost of the construction of the railroad from St. Louis to the Iron Mountain, ready for

rolling stock, averages $40,000 per mile along its 80 miles, and that while the cost of construction of the railroad from the Iron Mountain to Indian Ford, ready for rolling stock, averages $30,000 per mile along its 70 miles, the cost of construction of railroads from Indian Ford through various portions of the Swamp Region, ready for rolling stock, averages in general only $18,000 per mile, being only about one-half as much as the average from St. Louis to the Indian Ford.

That the length and cost of the Missouri portion of the St. Louis, Memphis and New-Orleans Railroad may be somewhat minutely yet concisely shown, we may conclude, from the data above stated, as the distance from Indian Ford to the Arkansas line, in Grand Prairie, Dunklin County, is 60 miles on an air line; and as the average deviation from an air line may be fairly represented by one-sixth, that the length of Indian Ford and Grand Prairie line is 70 miles, and that the cost of construction of this link, ready for rolling stock, averaging $18,000 per mile, is $1,260,000; and placing the links in tabular form, we find

The length of the St. Louis and Iron Mountain link	80	miles.
" Iron Mountain and Indian Ford link	70	"
" Indian Ford and Grand Prairie link	70	"
Total length of the Missouri portion	220	"
Cost of 1st division, 80 miles, at $40,000 per mile		$3,200,000
" 2d " 70 " 30,000 "		2,100,000
" 3d " 70 " 18,000 "		1,260,000
		$6,560,000
By adding cost of rolling stock, together with buildings and fixtures for same, at the rate of $4,000 per mile, 220 miles		880,000
We find total cost of Missouri portion, in running order		$7,440,000

Touching the Arkansas portion of the St. Louis and Memphis Railroad for the route above indicated, as it may become a link of vast importance in the Mississippi Valley Railroad, and as it was originally and almost universally thought to be utterly impracticable, it is but justice to Mr. W. D. Ferguson, of Arkansas, to fix the fact that he is the man who first projected and earnestly advocated this route. One year ago from this date, at the Memphis Convention in June, 1853, in conversation with the author of this article, he presented the claims of this route, and urged them with the light of his experience on the ground, and with the warmth of his enthusiasm in the prospect. Not one word could we then hear in its favor excepting from him.

Since then but little has been said or done on this subject until the first day of March, 1854, when G. W. Underhill, of Arkansas, E. H. Porter, of Tennessee, and L. M. Kennett, of Missouri, with their associates in each of said States, formed them-

selves into a corporation under the general law of the State of Arkansas, by the name of *Memphis and St. Louis Railroad Company*, for the purpose of building a railroad through Arkansas from a point opposite or near Memphis, "on or near a direct line between the same and the City of St. Louis, Missouri, and running thence as nearly as said Company may deem it practicable in the direction of St. Louis, so as to reach a point on or connect with the St. Louis and Iron Mountain Railroad, or any other railroad or point thereon, in that general direction."

The charter was filed in the office of the Secretary of State of the State of Arkansas, on the 6th day of March, 1854; and on the 18th day of the same month the Board of Commissioners of said Company met and organized by the election of Ethel H. Porter, President of the Company, and J. T. Swayne, Secretary.

As the legal provision is thus obtained for building the Arkansas link of this road, we will now proceed to inquire into the probable length and cost of the same.

For the sake of avoiding circumlocution, we will designate the point on the boundary line between Missouri and Arkansas east of the St. Francis River, where this railroad will probably cross, by the name which is given to the strip of country there extending both into Missouri and Arkansas; that is, Grand Prairie, although the village of Grand Prairie is not exactly at this point.

From this point to Memphis the distance on an air line is about 60 miles, being the same distance as from this point to Indian Ford. By the reports gathered from the experimental surveys of the Iron Mountain Railroad Company, throughout various portions of the Swamp District, and from the facts stated by Mr. Ferguson, of Arkansas, the general character of the country from Indian Ford to Grand Prairie seems to be about the same as that from Grand Prairie to Memphis; and as the air line distance is also the same, therefore it is reasonable to make the same allowance for the length and cost of a practicable route from Grand Prairie to Memphis as from Indian Ford to Grand Prairie.

Calculating then on this hypothesis, the length of Grand Prairie and Memphis link is 70 miles, and the cost of construction of the same, ready for rolling stock, is $1,260,000. Calculating the cost of rolling stock, together with buildings and fixtures for same, at the rate estimated for the Missouri portion, to wit, $4,000 per mile, 70 miles, it is $280,000; making the

Total cost of the Grand Prairie and Memphis Road in running order,	$1,540,000
To which add the total cost of the St. Louis and Iron Mountain Road to Grand Prairie in running order.....	7,440,000
And we find the total cost of the road from St. Louis to Memphis....	$8,980,000

The total distance from St. Louis to Memphis by this route, according to the above estimates, is 290 miles; which, with a speed on the road of 30 miles an hour, brings St. Louis and Memphis within ten hours' distance of each other.

Having ascertained the probable length and cost of the St. Louis and Memphis Railroad, we will proceed to an examination of the Memphis and New-Orleans Road.

The distance from Memphis to New-Orleans, on an air line, is 342 miles. These two points are connected by a road in process of construction composed of three links, which are the "New-Orleans, Jackson and Great Northern Railroad," reaching from New-Orleans to Canton, the "Mississippi Central Railroad," reaching from Canton to Grenada, Miss., and the "Mississippi and Tennessee Railroad," reaching from Grenada to Memphis.

The distance from New-Orleans to Canton, air line, is			175 miles.
Do.,	Canton to Grenada,	"	78 "
Do.,	Grenada to Memphis,	"	93 "
Total distance by deviating links		"	346 "
Do.,	without deviating	"	342 "
Amount of deviation by the links		"	4 "
By allowing on the sum total a deviation of			44 miles,
From the air line distance of the links			346 "
The length of the practicable route from Memphis to New-Orleans is			390 miles.

In order to show the progress and prospects of this combined enterprise in Louisiana, Mississippi and Tennessee, we will quote a paragraph from the memorial of the Mississippi and Tennessee Railroad Company to the St. Louis and Iron Mountain Railroad Company, dated 18th March, 1854:

"The greater portion of this route is already provided for. From New-Orleans to the Mississippi State line, the "Great Northern and Jackson Road" is nearly completed, and will soon be finished all the way to Canton, Mi. Thence the 'Mississippi Central Road' to Holly Springs, passing Grenada, Mi., is under contract, to be completed in two and a half years. From Grenada our road, 'the Mississippi and Tennessee,' completes the line to Memphis; and the means at our command warrant us in the confident expectation of its early consummation."

It will thus be seen that the southern and larger portion of the St. Louis, Memphis and New-Orleans Railroad is rapidly progressing, with brilliant prospects of entire completion long before the Memphis and St. Louis portion can be done, according to present indications.

But the presentation of these facts should stimulate the public mind with renewed activity on behalf of the St. Louis and Iron

Mountain Railroad, that, while this work is being built to the Mountain, means and spirit may be gained to drive it on to Memphis; that a respectable portion of the 2,000,000 acres of swamp land in Southeast Missouri may be applied to its construction, and thereby to their own reclamation; their net proceeds remaining a school fund vested in the stock of the Railroad Company. This is doubtless the best thing that could be done with a large portion of the swamp lands, both in Missouri and Arkansas; and it may be that half enough could be realized from these lands, in Missouri and Arkansas together, to build the road from Indian Ford to Memphis, 140 miles: the amount necessary to complete this portion being, according to the abovementioned estimates, only $3,080,000. Means may be gained to prosecute this enterprise by arousing a spirit in Congress in behalf of a grant of lands for the Mississippi Valley Railroad, the St. Louis Convention having sent them a memorial on this subject in December, 1852, and the Memphis Convention having endorsed the memorial in June, 1853. This grant of land by Congress should be made liberal enough to meet one half the cost of building this road from St. Louis to Indian Ford, 150 miles. Then, the length of this road being the same from St. Louis to Arkansas, as the length of the North Missouri Railroad from St. Louis to Iowa, each one being by a singular coincidence just 220 miles; and as the cost of construction of the Iron Mountain Railroad is also equal to that of the North Missouri Railroad, and its value to the State also fully equal, it therefore follows that an equal amount of State credit should be granted to each. But,

The N. M. R. R. has received	$2,000,000
While the Iron Mountain Railroad has received only	750,000
Leaving the claim of the I. M. R. R. for	$1,250,000

of State credit, which it is but just and reasonable to suppose will be allowed by the Legislature, as soon as it convenes.

Let, then, this Swamp Land grant, this Mississippi Valley Railroad grant, and this grant of $1,250,000 State credit be gained, while the contractors are building the road from St. Louis to the Iron Mountain, then means and spirit enough will be realized to drive this work on with energy to Memphis.

The people of St. Louis have already acted with a noble liberality towards their railroad enterprises. They have given $2,805,000 to the Pacific Railroad, and more than $2,700,000 to the Mississippi Valley Railroad, about one-half of the last sum to the North Missouri portion, and the other half to the Iron Mountain portion; making the amount given by the city, county, and private subscriptions of St. Louis to these rail-

roads over $5,500,000. Besides, the people of St. Louis have given liberal aid to the railroads in Illinois, and all these works are progressing in every direction. And, although the people of St. Louis have raised these means and shown this spirit, they would be ready and willing in case of an emergency to raise and show more. But for what they have already done they manifestly deserve the applause of the whole country, from the Lakes to the Gulf, from the Atlantic to the Pacific, and should, at the earliest possible moment, receive generous assistance from the State and National Governments worthy of the magnanimity they have displayed.

The means of the St. Louis and Iron Mountain Railroad Company are as follows, to wit:

Subscription of the City of St. Louis	$500,000
" County of St. Louis	500,000
Other corporate and private subscriptions	500,000
	$1,500,000
To this add State credit granted	750,000
Total amount of means at command	$2,250,000
And to this add the amount of State credit, which, as above shown, may be reasonably anticipated	1,250,000
and then we realize the amount of	$3,500,000

enough to complete the road beyond the Iron Mountain. To this add the Mississippi Valley Railroad grant, and the Swamp Land grant, and thereupon the Company will soon gain means and spirit enough by their own credit, which will then be firmly established on a high and commanding position, to build up the whole line from St. Louis to Memphis with dispatch and ease.

When this is done, the railroad connection from New-Orleans to St. Louis will be complete, while at the same time the North Missouri Railroad Company, together with the Iowa and Minnesota interests, will be extending this connection to the Falls of St. Anthony, reducing the distance from New-Orleans to the Falls by railroad to the same number of miles New-Orleans is from St. Louis by the river, to wit, 1,200 miles.

Art. IV.—NATURE AND PRESENT CONDITION OF INDIAN COTTON.

VASTLY important as cotton is to England and to America, it is not less so to India, though Indian cotton is but little esteemed by our manufacturers. It forms but a small part of the imports into this country, but a more conspicuous feature of those into China; the two quantities together, however, make but an insignificant portion of what is produced in the country. For

it may be seen cultivated in patches in almost every part of its wide extent, in some provinces forming nearly one-fourth part of the *khureef*, or wet season crop, and necessarily an important item in the agriculturist's returns. But it is also of great importance to the manufacturing population, and to the people themselves. Its hundred millions of inhabitants are clothed in home-grown cotton, in the hot weather, and in the rains in calicoes and muslins, and in winter in an additional quantity, for their calico coats are padded with cotton. At night they lie on beds and pillows stuffed with cotton, and instead of blankets they cover themselves with quilts of calico padded with the same material. In place of doors and windows, they hang up curtains padded with cotton. Awnings and carpets, tents and tent ropes, the coverings of carriages, the housings of elephants, and the halters of horses, are all made of cotton.

Mr. Woodbury, Secretary to the United States Treasury, calculated the cotton crop of India as amounting, in the year 1834, to 185,000,000 pounds; but this is far short of the truth, unless the crop for export only is intended. For in the year 1818, 90,000,000; in 1836, 80,000,000; and in 1841, upwards of 100,000,000 pounds were exported to this country, besides considerable quantities, as 50,000,000 also in 1818 to China, and a little into Nepal and the Sikh territories. These were only the surplus of what was required for the use of the inhabitants and for the manufacture of cotton goods which were in the same years exported to different parts of Asia, and some even to Europe. Major General-Briggs,* who has paid considerable at-

* Gen. Briggs, in a paper read before the Royal Asiatic Society, stated that the ordinary dress of a male Hindoo consists of—

A dhoty	4	square yards.	
Doputta	8	"	
A Turban	12½	"	
Not less than	24½	"	weighing above 3½ lbs.
Add to this, the sary, or female dress,	8	"	" 1½ "
We have	32½	"	5 "

Those who do not wear the dhoty invariably wear a cotton waistband, besides a loose gown and trowsers; and he assumed 2½ lbs. to be worn by each well-clad person, which must be below the truth. To the Cotton Committee, he replied:

"1343. From your knowledge of the people of India, can you say whether the consumption of cotton amongst them is very extensive; in fact, that cotton is used by them to a much larger extent than it is amongst the population of this country for a great variety of articles?—It is used for all the purposes that hemp and flax, and hair and wool, are used in this country. The home consumption is something enormous. I exhibited at the Asiatic Society the cloth of a man's dress and a female's dress, and the weight of those two was five pounds; the average dress of each inhabitant, therefore, was two and a half pounds; and if we multiply that by the population, assuming it to be 150,000,000 over the whole of India, it will amount to 375,000,000 of pounds. But it is used for beds, pillows, cushions, awnings, canopies, and ceilings, draperies and hangings, carpets, screens, curtains, quilting and padding of every description, both for padding clothes and for saddles, for tents,

tention to the subject, and is well acquainted with the habits of the natives of India, estimates that they require not less than 375,000,000 pounds for only a single dress weighing two pounds and a half, and that as much more cotton will be required for all the other purposes for which it is employed; making the annual crop amount to 750,000,000 pounds. But he adds that Dr. Wight considers that each individual in India consumes twenty pounds of cotton for those different purposes per annum, and that this "would be equivalent to about 3,000,000,000 annually used in the country." This, however, appears too high an estimate, as the number of those who use less than twenty pounds greatly preponderates over those who use so much. In N. W. India it is calculated that if a district produce only 5 lbs. for each individual, it is barely sufficient for the wants of the people; that 2 lbs. is not enough for the poorest peasant. The quantity produced must evidently be immensely large, and that which is exported bears but a small proportion to what is consumed in the country. But if so large a quantity of cotton wool is used up by the people themselves for clothing and coverings, it is evident that, in a country where spinning and weaving are all done by hand, multitudes of the natives must be employed in the cotton manufacture of India. A writer in the 'Examiner,' well acquainted with India, and who considers the population to amount to 120,000,000, estimates that allowing ten shillings for the annual worth of every person's wardrobe, it would amount to £60,000,000 of manufacture, which is equal to the highest value that has been set upon that of this country. We need not at present consider whether this is too high an estimate, nor attempt to calculate the number of acres which must annually be under cultivation to produce the immense crop of Indian cotton. But it may be admitted that the culture appears to be of sufficient importance to command the attention of the agriculturist, the more so as the different qualities of his produce can all be used up, the best for weaving and the worst for padding. Such considerations may, however, make him indifferent to the demands of foreign commerce.

We have hitherto spoken of India as a great country, growing immense quantities of raw material, and making it up into useful clothing for her teeming population; also long famous for exporting her elegant fabrics to the most civilized nations of ancient as of modern times. In the present day, however, we often hear

ropes for tents, halters for horses, and, in fact, applied to all the purposes that hemp and wool are used for in this country. I assumed at that time, without any correct data, that it would require at least as much more annually for such purposes, which would make an amount of 750,000,000 pounds. But I find that Dr. Wight states, who has had a much better opportunity of judging than I had, that each individual in India consumes 20 pounds of cotton for those different purposes per annum, which I have estimated at 5 pounds. Now, for the limited quantity that I have stated, it would require 312,000 tons of shipping to move it; but, if Dr. Wight is right in estimating it at four times the amount, that would be equivalent to about 3,000,000,000 annually used in the country."

the country talked of only in the light of a cotton farm, whose business it should be to supply the raw material to England whenever it is required, and to take back her manufactured goods in any quantities that the makers choose to send. If we consider the disastrous consequences which ensue in England upon the occurrence of a short supply, and of an increased price, of cotton, it is not surprising that not only those who are engaged in the manufacture, but that the public, should feel interested in the field of culture being enlarged. So that the irregularities of supply, dependent as these chiefly are on vicissitudes of climate, might be neutralized; and also that the manufacturer should be more independent of the intervention of untoward political events. India, notwithstanding its enormous distance, is generally looked to as the country which, from its great extent, and apparently illimitable powers of production, is capable of counterbalancing the existing irregularities of supply and price. As the occasional deficiencies of America, and the consequent demands of England, have frequently occurred, and for a series of years, it is eagerly asked why India does not, like America, send, not only a regular, but a regularly increasing, supply of cotton. It is not doubted that it must be the wish, and would be for the benefit of the Indian farmer, to share more largely in a commerce which the American planter makes a principal object of desire, indeed nearly monopolizes. That he does not do so is ascribed by some, as we have stated, to mismanagement, and by others to the absence of a regular demand and of remunerative prices. Of the demand for cotton in general, there can be no doubt. If India, therefore, has anything to complain of in this respect, it must be owing to the nature of Indian cotton, or to the state in which it is sent to market. As the whole question may be found to hinge upon such points, we shall inquire into their truth before discussing questions of price, or of improvements in culture or cleaning, or the alleged impediments to the increased imports of Indian cotton.

It is evident that, before proceeding with the question whether India is capable of supplying more cotton for the manufactures of Europe, it is necessary to determine whether the manufacturers themselves do actually require, in large quantities, such cotton as the natives themselves use, and which India could most easily send: or whether it is some other kind or condition of cotton which is to be grown, or prepared, in India. The questions, it is clear, are very different: one dependent upon causes which have been, or may still be, in existence; the other, probably, on the proper application of knowledge and principles derived from other sources. We shall first discuss the nature and present condition of Indian cotton, and then proceed to improvements in cleaning and in culture of different kinds of cotton, and

ascertain of what quality and at what prices these can be produced in India.

With regard to the quality of Indian cotton, it will readily be admitted that some of it at least must be fitted for the purposes of cotton manufacture, if we consider only the substantial appearance and well-known durability of the far-famed Indian calicoes, or the delicacy of texture of the still more celebrated muslins of Dacca, as it was and still is, or of the Chunderee of the present day. These are described by Tavernier as "so fine, that you can hardly feel them in your hand;" while they have been described more poetically as "webs of woven air," and were attempted to be depreciated by an English writer of the 17th century calling them "only the shadow of a commodity." It may happen, however, that cotton, well fitted for such purposes when spun by the delicate fingers of the Hindoo, may yet be unfit for the iron handling of machinery. As it is, the weaver of the southern provinces depends for a part of the success of his manufacture upon the softness of his climate, while the stern Mohammedan of Northwest India immures himself in underground work-shops, of which the air is artificially moistened, in order to produce the beautiful fabrics which are prized by, and still adorn, the wealthy of his land.

It is probable, however, that the cotton of different provinces of an extensive country like India may differ so much, that what is produced in one part may be fit for the purposes of the English spinner, while he may be unwilling to employ another, even though esteemed for many native manufactures. The extent and regularity of the foreign demand for Indian cotton will often depend, in a great measure, upon the proportion brought to market of that which is of the best quality to that which is indifferent; and it is very certain that the best commodity may be sent in so dirty or adulterated a state to market, as greatly to depreciate its value, and interfere with its regular employment.

Indian cotton is well known to have certain good qualities of its own. By the natives of India it is esteemed for wearing well; in this country it is valued for its color. Mr. Bazley, in reply to a question by a member of the Cotton Committee, stated that "the Indian cotton is always of a rich creamy color, and for its color it is frequently used as a mixture to improve the color of the worst or low American cotton." It is also thought well of for taking some dyes better than American cotton, and for its thread swelling in the process of bleaching; so that cloth made with it becomes more substantial in appearance. This property has long been known to the weavers of India. Thus Mr. Bebb, who was Resident at Dacca and afterwards a Director of the East India Company, stated, in 1789, that "the general distinction in quality the natives make, is, whether the thread made therefrom swells or not in the bleaching. That which is

in the neighborhood of the city (Dacca) to the eastward is reckoned not to swell, if it be not used the same season that it is gathered. The thread made of cotton produced in the south-east swells in bleaching, but less than the Hindostan cotton. The thread in the country west and northwest swells much in bleaching, more especially if it be hard twisted." These facts are interesting, as showing the minute attention paid by the natives of India to the cotton employed in their calicoes and muslins. But they do not prove the fitness of Indian cotton for English machinery, because most of it has one great defect, that is, shortness of fibre, or of staple as it is called, which, though capable of being twisted between the fingers, may yet be blown away during the various processes of machine spinning.

In wishing to ascertain the fitness of Indian cotton for English manufactures, it is useless to adduce the opinions of any but of those who have seen its practical working. For brokers even, who have spent their lives in the employment, are fallible, and spinners do not pronounce a final opinion on a sample of cotton, until they have seen by experiment the quantity of yarn it produces in proportion to the waste. But on this point we have excellent evidence from the Presidents of the two Commercial bodies of Manchester, though we have to regret that it is not in favor of Indian cotton; but the truth is at all times preferable to mystification. Mr. Bazley, President of the Chamber of Commerce of Manchester, examined by the Committee of the House of Commons on the growth of cotton in India, and who uses only the finest kinds, as he stated, "perhaps no spinner has bought as largely as I have (cotton) at 1*s.* 6*d.* per lb.:" and the author has been told that "Gardner and Bazley's is of the very highest class of yarns." With respect to the quantity of cotton imported from India, Mr. Bazley stated that it was, upon an average, about 10 to 13 per cent. of the whole quantity imported into the country, but that the Indian cotton is so inferior, that the consumers have a table arranged to enable them to see, at a glance, what price they ought to give for it relatively to the American Orleans, or to the "Boweds." Thus, the spinner of No. 20 yarn says, when the Surat cotton is at 3*d.* a pound, it is his interest to give 3½*d.* a pound for American, for that he obtains from Surat only 12 ounces of yarn, whilst from American he obtains 13½ ounces.

Surat and American Cotton, at equivalent prices.

1 lb. Surat, yielding 12 oz. yarn.	1 lb. American, 13½ oz.	1 lb. Surat, yielding 12 oz. yarn.	1 lb. American, 13½ oz.
3*d.*	3½*d.*	4	4⅞
3⅛	3⅜	4⅛	4⅝
3¼	3⅝	4¼	4¾
3⅜	4	4⅜	4⅞
3½	4⅛	4½	5⅛
3⅝	4¼	5	6
3	4⅜		

It does not, however, appear, from this table, whether this difference of price is owing to the intrinsic inferiority of the Indian cotton, or to the dirty state in which it is usually sent to market. Both causes have, no doubt, their influence. For Mr. Bazley, in reply to questions, stated that it was found by experience, that the waste in using Surat cotton is 25 per cent., whilst from the American the loss is 12½ per cent.; that is, that from every 100 lbs. of Surat cotton which the spinner takes into his mill, he produces 75 lbs. of yarn; and that from every 100 lbs. of American cotton, he produces 87½ lbs.; also that the same machinery produces a larger quantity of yarn from the American cotton than from the Surat cotton; and when asked whether that does not arise from the smaller number of breakages, he replied—

"635. Yes; and from the American cotton requiring fewer turns from the spindle, and for the quantity of yarn coming through the rollers, less twist per inch.

"636. Are you aware whether the consumption of the Surat cotton is confined almost exclusively to the manufacture of the weft, that which runs across the piece, and not the warp, which is lengthways, in consequence of the Surat being so short in the staple?—In very coarse numbers the Surat is applied to warp purposes, but as the numbers increase, generally there is a mixture of the American with the Surat for weft."

A portion of the loss seems, however, to be made up, for Mr. Bazley further says:

"639. Is it always easy to distinguish one from the other by the color?—Yes, it is. From Surat cotton, which cost 3¼d., the yarn No. 20 is worth 5⅞d.; and from American cotton, which cost 4¼d., the yarn is worth 6½d. You see that in using the American cotton, the spinner has actually a less amount for working the cotton than he has in the case of the Indian cotton; those are numbers 30; one is Surat, and the other American—[*handing in two other specimens*]—the Surat cotton for 30 cost 3½d., and the yarn is worth 7d.; the American cotton for 30 cost 4½d., and the yarn is worth 7¾d. In that case the spinners have 3½d. for making the Surat cotton into yarn, but for making the American cotton into yarn only 3¼d."

"640. *Chairman.*] Do you suppose that the difference of a farthing is compensated, or more than compensated, by a smaller amount of loss in working up the American cotton?—Clearly by the greater turn off."

Provided that greater care was taken in cleaning the Indian cotton, it was stated that a speedy rise in price would take place in Liverpool. But mere cleaning is not sufficient, for some cotton from the neighborhood of Agra, which had been "cleaned admirably," was yet stated to be unsuited to the English market, and, like the general produce of India, inferior.

"734. What increase would be necessary of such cotton as you could buy and profitably work up, to affect the price of the American cotton?—Probably from 10 to 25 per cent. of increase.

"735. How great an improvement in the cotton would be necessary to give you an article from India that you could buy and work up? You say that you do not buy much now?—An improvement of from 10 to 25 per cent. would, I should say, vastly increase the consumption of Indian cotton. I now speak of the quality."

"745. *Mr. Bolling.*] From your knowledge of the state of trade, do you think that the import of Indian cotton into this country is likely to increase at all, as long as the native-grown cotton is adhered to?—I have seen some of the native cotton that is very little inferior to the American—the Surat; but I am satisfied that the quality of the cotton must be greatly improved before we can use it to advantage."

Mr. Aspinall Turner, President of the Commercial Association of Manchester, was next examined. He, on the contrary, has "been a large consumer of Indian cotton for many years, and indeed was not aware of any one in Manchester consuming more Indian cotton than himself." He, however, does not give a more favorable character of the Indian cotton, as fitted for general purposes. In the first place, Mr. Turner stated that there is very little refuse, technically called waste, in using American cotton, for most of it could be disposed of for "the purposes of inferior spinning;" while, of the Surat, a large portion comes which cannot be worked into inferior or coarse articles. But some of this, the author believes, can be used for wadding, and for paper-making. It is unfortunate that the word "Surat" is frequently used to signify Indian cotton generally, because the best kind of Indian cotton, which is nearly equal in quality to middling Uplands, is produced in the neighborhood of Surat, and brings a higher price than any other Indian cotton from indigenous seed.

We shall immediately adduce Mr. Turner's opinion respecting the dirty state of Indian cotton. With regard to its quality, he said, "I do not think that there will be a very great increase in the importations of Indian cotton, if the quality remains of an inferior description, as hitherto;" but "if you can improve the quality of the Indian cotton, so as to meet the American cotton in the market, it will never fall off." So Messrs. Hollinshed & Tetly, the well-known brokers of Liverpool, in their circular for 1847, inform their constituents that, "of Surat cotton it is worthy of remark, that the consumption has been greater than in any former year—a sure indication of a bad trade." Major-General Briggs, well acquainted with the subject, and warmly disposed towards India, at a General Court of the East India Company, held on the 20th February of the present year, remarked, "As

to the complaint of the Manchester gentlemen that they could not get cotton from India, that was owing entirely to the fact that the cotton which they required was not such as the natives of India used."

Mr. R. W. Crawford, a Bombay merchant, took a contrary view to the great spinners of Manchester, for he stated, that "it is a question more of reduction in price at present than of improvement in quality;" and on being asked whether the spinners in Lancashire would purchase cotton for spinning in this country, such as is grown in India at present, and to the exclusion of American cotton, provided it was cheap enough, replied, "Yes, if they could buy it cheap enough for those purposes;" and also, "if the cotton were cheap enough, its quality is sufficiently good to afford material for the spinning of three-fourths of all the cotton spun in this country at the present time." "Q. 2759. For the great bulk of the trade they use the lower numbers?—Yes, the great bulk of the trade spinning under 20's." So Mr. Chapman, Manager of the Great India Peninsular Railway Company, in his "Statement of Cotton Facts," addressed to T. Bazley, Esq., as Chairman of the Chamber of Commerce, Manchester, states, "that cotton of good quality, for English use, is always to be had in Berar (Central India, 300 to 400 miles from Bombay, at about 1½d. per lb., ranging of late years from 1¼d. to 1⅞d. The quality of this cotton is such, that at a certain relative difference of price (averaging about 15 per cent. less for Indian than American), it can be used instead of American for more than 50 per cent. of our manufactures," that is, it will afford material for all yarns under No. 20. This is a question that can be decided only by spinners and manufacturers. The author regrets that he has been unable, notwithstanding numerous inquiries, to obtain confirmation of the correctness of this opinion, though he would rejoice to do so, as the question would then be comparatively easy, especially as the cottons of Broach and Surat, districts situate close to the sea-coast, produce cottons which are considered superior in quality to those of the far distant territories of the Nizam. The author, however, has no doubt, from facts which will be afterwards adduced, that some of the indigenous cotton of India is fitted for the purposes described, and a portion of it for even higher numbers; but he believes that the great mass of the cotton produced in India is not so fitted from the shortness of staple. But an important practical inference may be deduced from the fact of the indigenous cotton of one part of India being longer in the staple than that of another, as they are both produced by the same species of plant; for if so, it becomes an important point to determine the physical states in which such cotton is produced, and to ascertain whether the same peculiarities of soil and of climate, with suitable culture, cannot be found in other parts of India.

With regard to the dirty state in which Indian cotton is sent to market, we shall see that in the unchangeable East, things still are as they long have been. Thus, in 1803, we find it stated, "The native sort was not well cleared from seeds and extraneous matter."—(*E. I. C.'s Cotton Papers*, p. 28.) In 1810, when a large quantity of cotton had been imported by the East India Company, we find the Court of Directors writing to Bombay, "that no excuse will hereafter be admitted by us for the foulness, dirt and seeds which are suffered to remain mixed with the cotton; and it is our positive order, that the commissions be not paid to any commercial resident whose provision of cotton shall be faulty in this particular," (l. c. p. 35 and 36.) That no improvement has taken place, even up to the present time, with the great mass of Indian cotton, is clear from the evidence of Mr. Turner, who stated, "that in the spinning establishment of which I am at the head, we are in the habit of throwing upon the waste land an amount of dirt, for which we have paid £7,000 per annum, chiefly consisting of soil, sand, dirt, and various extraneous matters which have been introduced, I suppose, or have never been cleaned out of the cotton." (Q. 789.)

The author, in a paper read before the Statistical Section of the British Association at Oxford, June 28, 1847, said, "Thus, at other times, we are told that the chief impediments to an increased consumption of Indian cotton is the dirty state in which it reaches the manufacturer; this dirtiness being dependent, in the first instance, on the careless manner in which it is first collected, and then housed; or it is owing to the fraudulent additions made to it by the bunyas or wakarias, who purchase it from the ryots. Thus, it is sometimes adulterated with seed, cotton in seed, fine sand, or finely-powdered salt, scattered over it at intervals; as the dews of night are allowed to fall upon it when spread out in an open court or yard, and before the sun is up it is packed into bales. Sometimes an inferior is mixed with a superior kind of cotton, by a process technically called 'flogging.' Further injury is sustained by the daily unloading when conveyed on bullocks. These, moreover, are described as eating up the cotton 'by mouthfuls out of the bales;' also, that 'the brinjaries and cartmen themselves steal largely;' and finally, that even the boatmen, in conveying the cotton from the tender to the ships, steal a good deal of cotton, as 'canoes and small boats come alongside, under one pretence or another, and receive the bundles previously prepared and secreted.' The same thing takes place in the conveyance of cotton from Broach to Bombay, as liquor boats come alongside those conveying the cotton, and exchange some of their arrack for cotton, which is abstracted from the bales, and its weight supplied with sand, mud, or salt water."

We may now produce proofs of the above statements, and

see how all this dirt gets admission into the cotton. We shall take the evidence of those chiefly who are practically engaged in the subject, and shall see how much the cultivator is in fault, and how little he is encouraged to take any pains in improving the state of this great staple. We refer not to one, but to the principal cotton districts of India; some situated near the coast, others far in the interior, but all laboring under the same reproach of sending dirty cotton to market.

The province of GUZERAT may first command our notice, as being one of the principal cotton districts of India, and having within it both Surat and Broach, the two places most celebrated for the goodness of the indigenous cotton. All parts of the district are, moreover, within a short distance of the sea-coast of the Gulf of Cambay. The produce is, moreover, conveyed only in carts and in the dry weather; it cannot, therefore, suffer from the state of the roads; while the freight from Broach to Bombay, as stated by the Bombay Cotton Committee, is as low as from London to Hull. Mr. Vaupell, who describes himself as having had several years' occupation and experience in the cotton trade (from 1818 to 1826), has published the result of his observations in the 'Transactions of the Agricultural Society of Bombay.' Mr. Vaupell says: "The cleanliness of the article depends mainly upon the attention bestowed in the gathering; but the cotton, as it comes from the gin, is beautifully clean, and if forthwith taken to the screws and packed in bales, would be all that could be desired; but it is generally either put into burkees or dokras (large gunny or cloth bags), in carts; and while so doing is adulterated with seed, cotton in seed, fine sand, or finely-powdered salt, scattered over it at intervals. Another mode of adulteration is, by having the entire area of the yard, or court, daily fresh cow-dunged about sunset in the evening; and the cotton, as it comes from the churkas, spread thereon before the ground is half dry. The dews of the night are then allowed to fall upon it; and early next morning, before the sun is up, it is packed into bales. This process, besides tinging and soiling the cotton with the wet cow-dung and earth, adds considerably to the weight of the article, while it materially injures it both in fibre and cleanliness.

"The cultivator has, generally speaking, no immediate inducement to render the produce of his fields unfit for the market, for in most cases he disposes of the cotton in seed, in the state in which it is gathered; from that moment his concern about it ceases, and it rests with the purchaser, or middleman, to prepare it for the exporter." These "agents employed between the grower and the exporter are generally Bannians, who, to the eastward of the Gulf of Cambay, are termed Wakarias. It is these people who find their interest in adulterating the cotton previous to disposing of it to the exporter." "Of late years,

the quality of the produce has deteriorated considerably, more particularly in respect of cleanliness."

This view is fully confirmed in the "Letter of the Bombay Chamber of Commerce to the Government of that Presidency," dated January 21, 1841, from which the author also quoted in the above paper.

"The baneful influence of these Wakarias, or Middlemen, is considered by the Bombay Chamber of Commerce as the principal cause which impedes the extension and improvement of the culture and trade of cotton in Western India, and which they characterize as 'the state of hopeless pecuniary bondage in which the ryots are kept from one generation to another to the Wakarias and village Bunyans.' These men make advances to the ryots to enable them to sow their cotton, and to pay their assessment, purchasing the produce always before it is gathered, more frequently before it is ripened, often before it is even sown. It is the same class of persons, the Wakarias, to whom most of the frauds enumerated above are to be attributed; and till the baneful influence of these men is supplanted, either by the gradual settlement of a superior class of agents in the districts, or by bringing those districts, by the aid of steam, within the immediate and certain reach of the European merchants, all other measures, it is feared, will fail." Again, par. 55, "With the employment of all other modes of encouragement, this the committee consider to be, after all, the great, almost the only eventually effectual, remedy for the numerous causes, whether arising from poverty, from ignorance, from negligence, or from fraud, which at present obstruct the improvement in cotton."

Merwanjee Hormusjee, who "served for several years, and with distinguished credit, as native agent for the provision of the Company's China and British Cotton investments," under Mr. Pelly, and who has since done much for the improvement of cotton, ascribes "the principal cause of the cotton of India not fetching prices equal to that of America," &c., "to the very careless manner in which it (the cotton) is gathered from the plant, and immediately after thrown into deep pits (kullees) dug for the purpose, and in which it becomes mixed up with clods of earth, imbibes the night-dues (dews), whereby its color and quality become injured." Dr. Gibson, who is so well acquainted with the habits and modes of thinking of the Natives, says, (*House of Commons' Return*, p. 60,) "They prefer the tolerably certain return received for the inferior article, to the trouble and expense required to produce cotton of superior cleanness." Dr. Johnston, Civil-Surgeon at Ahmedabad, attributes, (l. c.) among other causes, the little improvement in the gathering of cotton in Guzerat, "to the better return which the merchant in Bombay finds for the uncleaned and cheaper cotton, than he does for the

cleanly-gathered and dearer article." Mr. Vibart, the Revenue-Commissioner of Bombay, (*Return*, p. 66,) writes, that "the cultivators find that as ready a sale is obtained for cotton in a dirty and adulterated state as when brought to the market in a clean and first-rate condition, while the difference of price between the two articles does not repay them for the additional time and labor."

The SOUTHERN MAHRATTA country, lying to the south, as Guzerat does to the north of Bombay, is the next district which we shall notice: it contains within it the district and town of Dharwar. From thence much of the cotton, known in the market as Coompta cotton, is obtained. The distance is about 100 miles to the port of shipment, and the expenses of conveyance were stated, by Mr. Mercer, to be 10 rupees for 784 lbs. of cotton, which cost from 40 to 50 rupees, but that they would not be more than 5 rupees if a cart-road was made all the way, that is, down the mountain-side. This road has been made, and the expenses must therefore be reduced.

Mr. Shaw, collector of Dharwar, in 1843, wrote, "That a cultivator that will clean and tend his jawarree (millet) and wheat-field, will leave his cotton plantation to take care of itself, gathering the wool at the close of the season, some of which has fallen, and been lying for days on the ground, some scarcely in a fit state to be picked; neither can he understand that it is of any kind of importance it should be otherwise, although he knows full well, were he to pursue this course with his jawarree, or wheat, that he would be a sufferer, as the persons who purchase the one consume it on the spot, whilst the cotton is bought by an indifferent agent, shipped to a distant market, and there fetches just perhaps a remunerating price."

Messrs. Mercer and Blount, two of the American planters who have contributed so much to the improvement of the cotton of India, on their return had an interview with the Commercial Association of Manchester. Mr. Blount stated that the ryots "leave all the cotton in the field until the whole is ripe, and then they make one gathering of it; they get together the fresh and the old, making no distinction between the cotton and the dirt." Mr. Mercer stated that the person who usually advanced money to the ryot was himself a poor man. "He obtained this money from the banker, and buys the cotton from the ryot in connection with a large merchant, whose business it is to screw down the middleman to the lowest figure he can. The latter has no margin to go on; and on the slightest fluctuation of price, he has recourse to the expedient of scattering in seed and putting water on the cotton, to increase the weight. The native merchant afterwards does not hesitate, if his profits do not promise to be large, to add a little sand and water also, and thinks there is nothing like having good weight when he delivers it (the cotton),

and he knew many instances where the cotton had been repacked and the same system carried on."

Mr. Shaw says (l. c., p. 483), "It is, moreover, to me a mystery that a mercantile community like that existing in Bombay, should contentedly continue purchasing ill-cleaned and badly-cultivated cotton-wool at the Presidency, when an individual or company may here, on the spot, purchase cotton grown, if they please, under their own instructions, clean it, screw it, and ship it, at nearly half the price."

Before proceeding further, it is desirable to notice the quantities of cotton which are imported into, and afterwards exported from, Bombay. The Cotton Committee appointed there in 1846 give in their Report, dated March, 1847, a detailed account of the sources whence cotton is obtained, and packed and screwed into bales in the Island of Bombay previous to being re-exported. Thus—*Abstract of Statement* A:

Average Annual Imports into Bombay for thirteen years, ending with 1846.

From	Guzerat	59,873,024
"	Conkun (Concan)	30,763,610
"	Malabar and Canara	11,684,583
"	Cutch and Scinde	5,397,438
"	All other quarters	110,366
	Total	107,829,021

The average exports for the same years are stated by the Committee in their Report, to have amounted to 117,303,364 pounds, and that the largest export was in 1843–4, and amounted to 171,453,725 pounds; and that the smallest export was in 1834–35, and "That the first eight months of the current year, 1846–47, is proportionately much lower than any year immediately preceding it." With respect to the discrepancy between the imports and exports the Committee observe, p. 11: "In completion of these statistical records of the Cotton trade of Bombay, we beg leave to submit to government the following furthor information, which has been placed at the disposal of the Committee in the course of its inquiries:

Statement (H) showing the quantity of Cotton imported into Bombay by sea from 1834 to 1846 inclusive, to have been...	12,515,868 cwts.
Statement (I) showing the quantity sent in over the Sion Causeway from 1st May, 1839, to 31st Dec., 1846, to have been: India maunds 220,199 22s., or	161,805 cwts.
Total	12,677,673 cwts.

Or 937,896 cwts. less than the quantity which appears according to statement (A)."

The Committee also observe: "That the decline in quantity has been accompanied for seven years by a gradually increasing decline in value also." With regard to this observation, it is

probable that the former is only a consequence of the latter. For the Committee afterwards refer to "the healthy action produced upon the market by the comparatively small advance in the prices paid at Liverpool in August and September last, an advance which was quite sufficient to leave considerable profit to the exporter, with some benefit to the cotton trade also."

The quantity of cotton produced in Guzerat was estimated in the year 1789 to have been about 43,000 candies (of 784 lbs.), of which from 25,000 to 30,000 bales were exported. The price at that time of Ahmood and Broach cotton is stated to have been, at Surat, in March, Rs. 95 per candy, and in April, Rs. 98, but which fell before the season closed, in May, to Rs. 88 or Rs. 90. The price at Broach was from Rs. 12 to 15 less, according as the cotton had been brought by sea or by land to Surat. (E. I. C.'s papers, p. 10.) The zillah of 'Baroche' was acquired by conquest and cession in 1802–3 and in 1817; Lieut.-Colonel Williams, who surveyed it from 1816 to 1820, writes that "kuppas (seed-cotton) has of late years become a primary object of cultivation in this collectorate, as well as in the adjoining purgunnah, in consequence of the advance in its price from Rs. 45 to about Rs. 70 per bar (960 lbs.)" "The quality of all the cotton of the collectorate is the same, but its value is affected by its being gathered and kept free from all kinds of dirt, leaves, &c.; it is divided by the Commercial Department into three classes, according to the degrees of its cleanness; and the first class, or toomel (picked), fetches 4 rupees per bar more than the third class, which is called 'rasee.'"—'*Survey*,' p. 42.

The average exports of cotton from the different ports of Guzerat to Bombay, from the year 1834 to 1846, were about 60,000,000 of pounds, but in 1840–41 amounted to upwards of 96,000,000. A candy of cotton (784 lbs.), which had been as high as Rs. 165 in 1817–18, was sold in Bombay, in 1846, as low as 67 rupees; but the average at that time was 75, and is now about 80 rupees.

The Guzerat cotton, as it is sometimes all called, is produced within the Collectorates of Surat, Broach, Ahmedabad, and the contiguous native states; for instance, that which comes from Gogo is the produce of Kattywar, while some Candeish cotton is occasionally sent down by the Comdabarree Pass into the Surat Collectorate, and is from thence forwarded by sea to Bombay.

Under the head of Cutch and Scinde are included the produce of the former province, and the extensive native districts contiguous thereto, including all cotton exported from Kattywar, excepting that from Gogo.

The cotton which comes from the Conkun, or is exported from the ports under the Tanna and Rutnagerry Collectorates, such as Oomergaum, Tanapoor, Mahim, Bassein, Callian, Salsette, Caranja,

Panwell, Rygur, Rajapoor, Anjunwell, Rutnagerry, Viziadroog, Malwan, and Vingorla, is the produce of the Collectorates of Candeish and of Sholapore, but to a much greater extent of the western parts of Berar, as far south as Shorapore (not Sholapore): some of this is known at Bombay as Bursee cotton.

The cotton from Canara and Malabar, exported from the various ports of the extended coast, and known as Coompta cotton at Bombay from the principal port, is the produce of the Collectorates of Belgaum and of Dharwar, commonly called the Southern Mahratta country, as well as of the most southern part of Berar; and likewise of Bellary and the neighboring districts of the Madras Presidency, to which these two Collectorates, indeed, belong.

The average exports from Canara to Bombay amounted for the thirteen years ending with 1846 to about ten millions of pounds annually, and from Malabar to somewhat less than a million annually for the same period, having been only 728 pounds in 1837–38, though much higher in other years.

"Another item of great importance in the calculation of the cost of the cotton of Western India remains now to be considered; namely, the expense of conveying it from the various districts of its production to Bombay, as the port of shipment. We find, with respect to the cost of bringing cotton to Bombay by sea, whether from the ports of Guzerat to the northward, or those of the Conkun and Canara to the southward, that the ordinary rates of freight on native craft are sufficiently low, excepting occasionally towards the close of the fair season, to preclude the possibility of any reduction of practical utility being effected under this head. Three rupees per candy of seven cwt. appears to be about the average rate throughout the season from Broach, Tunkaria Bunder and Coompta, a rate which, if we suppose every candy of cotton to be carried 250 miles by sea, will be found not to exceed three-fourths to seven-eighths of a penny per ton per mile, and not more, we understand, than would be incurred in sending the same cotton a similar distance in the United Kingdom, or say between London and Hull, when the navigation is not closed for one-third of the year, as it is in this country."

If we proceed further southward into the territories of the Madras Presidency, we find the same methods pursued. Mr. Sullivan, then (in 1840) a member of Council at Madras, observes in a Minute, that "Dr. Wight gives 70 and 90 rupees the candy of 500 lbs. as the price paid for the Bourbon and indigenous cotton of the South of India; these are the prices paid to the brokers; the prices paid to the growers do not exceed 40 or 50 rupees, about 2¼*d.* per lb., while the price realized by the exporter is from 6*d.* to 11*d.*" It is quite clear from this that what is wanted, as Dr. Wight observes, is "more competition among buyers, and somewhat higher prices to growers." The distance from Coimbatore

to Cochin, the port of shipment, is 150 miles, 90 of cart-road and 60 of backwater. The expenses, according to Mr. Petrie, are 6¾ rupees for cart and boat for a bale of cotton from Coimbatore to Cochin.

Mr. Fischer, who has long been settled in the interior, and is described by the Madras Government as having extensive annual contracts with the cotton growers of the Salem and Coimbatore districts, gives it as his opinion, in a letter dated 14th May, 1841, to the Chief Secretary of the Government of Fort St. George, "that the general inferiority of our cotton is to be attributed mainly to the manner in which the trade in this article is at present carried on, namely, by the medium of a succession of brokers, from the dubash of the Madras agent to the village chetty, who advances to the ryot in his hour of need, whereby but the smallest per-centage of profit remains to the ryot after each of these middlemen has made his own profit; and consequently, the ryot has no sufficient inducement to bestow any other care than to reap the greatest possible quantity from his cotton-field."—(*Return*, p. 315.)

Mr. Petrie, in his evidence before the Cotton Committee in 1848, having referred first to the carelessness of the natives in gathering their cotton, and to his having succeeded in inducing them to take more pains, stated that "the up-country market is badly regulated; good articles do not always sell at their real value, and the price, even for the best cotton in the market, is but little more than it is for the worst; cotton that would be sold in England at 4½*d.* per lb., and cotton that would only bring 3*d.*, will sell there within 3 or 4 per cent. of the same value; the cultivators know this, and therefore they have no object in bestowing more care and labor."—(*Report*, p. 198.)

Mr. Finnie, one of the American planters, who had transferred his services from the Bengal Presidency to that of Madras, describes, in a letter to the latter Government, the state of the trade at Tinnivelly, the most southern cotton district, and from whence the cotton is shipped by the southern port of Tuticorin: "Here (Tinnivelly) the field is occupied by European agents, who, instead of encouraging the people to bring clean cotton, give a premium indirectly on the dirtiest trash. A contract is made, usually by the house itself, with the chetties for such a quantity of cotton of such a quality, and the very lowest sum is fixed. The chetty, finding he cannot get a price that would justify the delivery of such cotton as he has contracted for, agrees to it, well knowing that they must take such as he chooses to deliver them at the time. He knows they have their engagements to meet; they have made their arrangements; a ship is perhaps waiting; the presses are idle, and he brings in his cotton to the agent, who has merely to receive it.

"The cotton is produced by the ryot. He is always in his

banker's books, as deep in proportion to his means, as his European master, and can do nothing without aid. The brokers, or cotton cleaners, or gin-house men, are the middlemen between the chetty and the ryot. The chetties, being moneyed men, make an advance to the broker. The broker is particular in classifying the seed-cotton, and pays for it according to cleanliness, and then he has much of the trash and rotten locks picked out, not to make the cotton better, but because the rubbish chokes the churka and prevents it from working. The good cotton is then separated from the seed; and the bad stuff, which had been taken away from the good, is beaten with a stone to loosen up the rotten fibre from the seed, and then it is passed through the churka. The good cotton and this bad stuff are both taken into a little room 6 × 6, which is entered by a low door about 18 inches by 2 feet, and a little hole, as a ventilator, is made through the outer wall. Two men then go in with a bundle of long smooth rods in each hand, and a cloth is tied over the mouth and nose; one man places his back so as to stop the little door completely, to prevent waste, and they both set to work to whip the cotton with their rods, to mix the *good and bad together* so thoroughly, that a very tolerable article it turned out. Even after all this bedevilling, if the people get a living price for it, they let it go as it is. But, as is usually the case, they are shaved so close, that they are driven to resort to another means of realizing a profit. They add a handful or two of seed to every bundle, and this is delivered to the chetties, and the chetties deliver it to the European agents, and the European agents save their exchange, and their object is gained. The cotton is taken by the manufacturer at a low price, because he knows not what he is buying."

Mr. Mercer has also stated, and Mr. Finnie confirms the statement, "that an inferior and dirty cotton is the more profitable article to the native trade, and even to the European merchants." The Marquis of Tweeddale, at that time Governor of Madras, observes upon this statement, "It is manifest from this, and from the inferior condition in which the cotton wool of India continues to be sent to the British market, that the interests of the dealer or broker, and the merchant, are not identical with those of the manufacturer or the Government.

"The object of the latter is to raise and bring into the market an article of such quality, and at such a cost, as may stand in permanent competition with American cotton. The merchant and agent has no object in the transaction, but his immediate profits in any one year; and if the inferior article yield him as handsome or even a better profit than a selected and better article would do at a higher price, he will doubtless take it off the grower's and native dealer's hands to any extent, and it is hopeless to look for any permanent improvement under this system."

Art. V.—THE INDUSTRY OF THE UNITED STATES.

[The Report of the English Commissioners to the American Exhibition in New-York has, at last, been published. It embraces an extended view of the manufacturing system of the United States, written in the most liberal spirit. There are parts of the Report which will be given to the REVIEW in this and the following numbers.—ED.]

MARINE ENGINES, BEAM-ENGINES, RIVER AND LAKE STEAMERS, CALORIC ENGINES, RAILROAD WORKS, BUTTONS, PINS, CUTLERY, ETC.

THE vast resources of the United States are now being developed by the universal application of machinery, with a rapidity that is altogether unprecedented.

The principal marine steam-engine works are in New-York; but there are large establishments of a mixed character in almost every town of importance. The practice which prevails of combining various branches of manufacture in the same establishment, would also render separate descriptions of each somewhat complicated. In some cases the manufacture of locomotives is combined with that of mill-gearing, engine-tools, spinning, and other machinery. In others, marine engines, hydraulic presses, forge hammers, and large cannon are all made in the same establishments. The policy of thus mixing together the various branches arises, in addition to other causes, from the fact that the demand is not always sufficient to occupy large works in a single manufacture.

Nearly all the marine-engine works in New-York are conveniently situated on the water side, and have slips attached to their yards, where vessels may be moored. The rise and fall of the tide is generally so small as to obviate the necessity of docks. Steam-engines having their beams above the deck, are commonly used for the river and ferry boats, and they have generally a very long stroke. The following are some of the dimensions of a beam-engine of one of the New-York river steamers. Length of stroke, 12 feet; length of beam, 24 feet; depth of beam in the middle, 10 feet. The form of the beam is that of an elongated parallelogram; the outer frame or skeleton is made in one piece of wrought iron, inside of which is fitted another frame of cast iron, carrying the axis.

A steamboat running on the Ohio, from Pittsburgh to Cincinnati, has a pair of direct-acting engines with 32-inch cylinders and 8 feet stroke. There is no main crank-shaft connecting the two paddle-wheels, but each engine works its own wheel independently of the other. This arrangement enables the boat to be steered with greater facility round the sharp turns encountered in the tortuous course of the river. The framework and outer bearings of the paddle-wheels are supported by suspension-

rods, which are, as it were, slung over beams, and framework strongly constructed and fitted in the centre of the vessel. The main deck is 280 feet long, and 58 feet wide. The paddles are 38 feet in diameter, having 24 floats, 12 feet wide by 28 inches in depth. For shallow rivers, flat-bottomed steamers, propelled by a paddle-wheel at the stern, are commonly used. Two are being built of iron in New-York, drawing only two and a half feet of water, which are intended for the passage across the Isthmus of Panama by the Nicaragua route.

A marine-engine establishment at Buffalo is principally occupied in making engines for screw steamers intended for lake and river navigation. The propellers of those intended to run in shallow waters are made with four, and sometimes six blades each, and revolve with rather less than half their diameter immersed in the water. The blades are made of wrought iron, and bolted on to a cast-iron boss, fitted on the propeller-shaft, so that a blade broken or damaged by coming in contact with "snags," or other obstructions, may be easily replaced. Some of the dimensions of the machinery in a lake boat, used for carrying cargo, are as follows:—The propeller is 16 feet in diameter, with a pitch of 17 feet 3 inches, making 60 revolutions per minute; the cylinders are 36 inches in diameter, with a 10-feet stroke, and the speed attained averages about eleven miles per hour. The vessel has an upper deck for the accommodation of about sixty passengers. Small high-pressure steam-engines, for flour-mills, agricultural implements, and other machinery, are made in the same establishment.

Ericsson's caloric-engines have lately undergone repair and alteration in New-York, with the view of making the heated air act alternately upon each side of the piston, similarly to steam in an ordinary engine. The bottom of the cylinder is made of wrought iron, and arched. The upper part, in which the piston works, is of cast iron, and is connected to the lower part by bolts. It was this lower portion which proved defective in strength in the late experiments.

The iron castings in some of the establishments are very good, and cylinders from 8 to 14 feet in diameter are well bored, with a finishing feed of cut of about three-eighths of an inch per revolution, which is at a width of cut at least three times as great as that ordinarily given in English works.

At Pittsburgh a large casting for a hydraulic press was lately cooled by the following method:—Water was introduced into the interior of a core by a pipe, which extends to the bottom, and fills it previous to casting, provision being made for the escape of the air by making the core fluted.

When the metal was poured into the mould, it immediately heated the water, which was then drawn off by an escape-pipe

at the top of the core, a supply of cold water continually running in at the bottom.

Heat was thus gradually taken from the mass, and the whole cooled uniformly. This casting was 10 inches thick, and weighed 7 tons. It took from three to four days in cooling.

Major Wade, of Pittsburgh, has made many experiments on the tensile strength of this iron. He found that it required a force of 45,000 pounds to tear asunder a bar an inch square. Some of the results of his experiments have been published by the United States Government, in the *Ordnance Manual.*

The process of "pickling castings," as it is called, is performed in the following manner:

The castings are placed on two wooden stages, covered with lead, each being 20 feet by 12 feet wide, and supported by two rollers, about 18 inches from the floor. The trough containing the pickle (which consists of 2½ parts of water to 1 of acid) is of the same length as the stages, which are inclined towards it, to enable it to receive the drainings. The diluted acid is poured over the castings by hand, from a long ladle; and when they are dry, the operation is repeated as often as necessary. The stages are then inclined in the opposite direction, and cleansed from the coating of acid and sand by a powerful stream of water directed upon them from a hose-pipe.

In this country, when the process of pickling is adopted for light castings, it is usual to immerse them in the liquid. The American method was probably adopted in consequence of the high price commanded by manual labor.

The leading and trailing wheels of locomotives and railway carriage wheels are commonly hollow cast-iron disc wheels.

The process of annealing adopted in a large manufactory in Philadelphia is as follows:

The wheels are taken from the moulds, as soon after they are cast as they can bear moving, without changing their form, and before they have become strained while cooling. In this state they are put into a circular furnace or chamber, which has been previously heated to a temperature about as high as that of the wheels when taken from the mould. As soon as they are deposited in this furnace or chamber, the opening through which they are passed is covered, and the temperature of the furnace and its contents is gradually raised to a point a little below that at which fusion commences. All the avenues to and from the interior of the furnace are then closed, and the whole mass is left to cool gradually, as the heat permeates through the exterior wall, which is composed of fire-brick, four and a half inches thick, inclosed in a circular case of sheet iron one-eighth inch thick.

By this process the wheel is raised to one temperature through-

out before it begins to cool in the furnace, and, as the heat can only pass off through the medium of the wall, all parts of each wheel cool and contract simultaneously. The time required to cool a furnace full of wheels in this manner is about four days; and in this manner wheels of any form, and of almost any proportions, can be made with a solid nave.

The manufacture of these wheels was commenced in 1847, and in 1850, 15 tons weight were cast per day. The foundry and works as now completed are calculated to turn out 40 tons per day.

In another establishment the wheels while hot are lifted from the mould, and the centre part is placed in a hole communicating by means of a flue with a high chimney, and the edge is packed round with sand. A draught is thus created, which cools the mass of iron near the centre of the wheel, and in some measure prevents it from contracting unequally during the operation.

At a foundry in Worcester, the wheels when cast were taken hot from the moulds, and immersed in a pit of white sand, where they are left to cool gradually. In order to obtain the best chill, it is considered necessary to use cold blast iron made with charcoal.

There is a large demand for railroad spikes in the United States. On nearly all the railroads the rails are laid on transverse wooden sleepers, and are simply fastened down by large iron spikes with projecting heads, except at the junction of two rails, where the ordinary chair is employed.

In a manufactory at Pittsburgh, there is a machine which makes these spikes, each weighing ½ lb., at the rate of 50 per minute. They are packed in kegs, each containing 300. Seven men only are employed on the works, and they manufacture 5 tons of spikes per day.

In another establishment at Pittsburgh, 250 men are employed in manufacturing bar iron, rods, sheets, and nails. The iron is manufactured both with anthracite coal and charcoal.

They have 51 machines for making cut nails; many of them are self-acting in the feeding for the smaller sizes; the strip of iron is inserted in a tube, which is made to revolve alternately half round each way. They make 2,000 kegs of such nails per week, each weighing 100 lbs., and containing sizes from fourpenny up to tenpenny nails.

There is in the same factory a rivet-making machine, which makes rivets weighing seven to the pound, at the rate of 80 per minute. Its main shaft carries two cams, one a side cam which gives the motion for cutting off and holding the iron between the dies, the other a direct cam for forming the head of the rivet.

The cams for the nail-machines are made of chilled cast iron, and that part of the lever which acts against the cam is faced with a plate of bell-metal. Several large grinding-stones are used, having mouldings on their peripheries for restoring the dies when worn.

It is usual in this country to soften the dies by annealing previous to restoring their shape, and again hardening them subsequently. The shape may be thus more perfectly restored, but at a greater cost; and the operation of softening and re-hardening deteriorates the quality of the steel.

The manufacture of cast steel is not carried on to any great extent in the United States. Some works have been started in Pittsburgh, which have hitherto met with great difficulties, but they are now more successful.

Workmen were obtained from Sheffield, but they are said to be intractable, and fail to give satisfaction to their employers. There are two converting and nine melting furnaces, producing upwards of 2,000 lbs. per day. The steel sells at 17½ cents per pound (8½*d.*).

The engine-tools employed in the different works are generally similar to those which were used in this country some years ago, being much lighter, and less accurate in their construction than those now in use, and turning out less work in consequence. The proportion of slide to hand lathes is greater than in the generality of English workshops. Planing and drilling machines are commonly used; but there are comparatively very few horizontal or vertical shaping-machines, and a considerable amount of hand labor is therefore expended on work which could be performed by machines much more economically.

The foundries are, for the most part, large and well arranged, and are furnished with good powerful cranes. Great anxiety is now manifested by many manufacturers to have engine-tools of a better description than those in use; and before long there will, no doubt, be great improvement in this respect.

The energetic character of the American people is nowhere more strikingly displayed than in the young manufacturing settlements that are so rapidly springing up in the Northern States.

A retired valley and its stream of water become in a few months the seat of manufactures; and the dam and water-wheel are the means of giving employment to busy thousands, where before nothing more than a solitary farm-house was to be found. Such, in a few words, is the history of Waterbury, and all the Naugatuck settlements of Holyoke, Chicopee, Lowell, and Laurence.

Waterbury is situated in the Naugatuck valley, about 24 miles north of New-Haven. It contains many manufacturing establishments, carried on principally by joint-stock companies. Be-

sides other firms, there are 28 companies of which the greater number are employed in the manufacture of rolled and sheet brass, copper wire, buttons, German silver, pins, cutlery, hooks-and-eyes. The others are employed in manufacturing hosiery, felt, cloth, webbing, covered buttons, umbrella trimmings, leather, &c., &c.

Great facilities are afforded in many of the States for the formation of manufacturing companies. The liabilities of partners not actively engaged in the management are limited to the proportion of the capital subscribed by each, and its amount is published in the official statements of the company. In the case of the introduction of a new invention, or a new manufacture, the principle of limited liability produces most beneficial results. Persons who, from their connections or occupations, are likely to be interested in, or profit by, the new invention or manufacture, readily associate together and subscribe capital to give the new proposal a fair trial, when they are assured that their risk will not extend beyond the amount which they may choose to contribute.

The cost of obtaining an act of incorporation is very trifling; in one case where the capital of the company amounted to $600,000 (£120,000), the total cost of obtaining an incorporation was 50 cents (2*s.* 1*d.*).

Upwards of 200 men are employed by one of the companies in the manufacture of buttons, hinges, daguerreotype plates and frames.

The round-shaped button is formed by two punches, one working inside the other, each being driven by a separate eccentric, and the inside punch having the longer stroke. By this arrangement the disc is forced through the die, and drops into a box, thus saving the labor of picking out, which is necessary where a single punch and solid die are used. The spindle of the polishing lathe, in which the bottom is fixed whilst being burnished, makes 10,000 revolutions per minute.

The lathe in which the oval frames, used as settings for daguerreotypes, are turned, has an oval chuck, and a stationary cutting-tool fixed to the slide rest, for "truing out" the previously punched oval. Two milling-tools are used, one for forming the bevelled edge, the other for ornamenting the face of the oval frame. The milling-tool, as it revolves, is allowed to swivel so as to accommodate itself to the oval. When the bevelled edge has been formed, the first milling-tool is removed and another substituted while the work revolves. One workman is able to turn, and ornament by milling, two gross of frames per day.

No description of the machinery used in pin-making can be given, as the process of "papering" is all that is permitted to be seen.

The pins are all papered by machinery: they are placed in a

shallow feeding-dish in an inclined position, so as to allow them to descend gradually as they are shaken by a quick vibratory motion. They fall from the spout of the feeding-dish upon the centre of an inclined shallow trough. about 18 inches long, through which runs lengthwise a slit sufficiently wide to admit the shank of a pin, and yet suspend it by its head. It being a matter of chance, when the pin falls from the spout, whether it will drop into the slit or slide down the trough, a sufficient number are allowed to descend to insure the filling of the slit by those which happen to fall favorably.

The superfluous pins slide down into a box, from which they are again lifted from time to time to the upper feeding-dish. The descending line of suspended pins is conducted by the slit (which is covered at its lower end) to a sliding-frame, which is worked by the woman who attends the machine.

The frame carries a dozen grooves, and in each of these a pin is deposited as it passes under the slit: the pins are thus arranged in a row, with their points all turned the same way. The sheet of paper for receiving them is placed by the attendant on a grooved table, and deep folds are pressed into it at equal distances, and into the cross ridges thus formed, a row of pins is pushed by the carrying-frame at every thrust forward.

Under no circumstances whatever are strangers allowed to enter the rooms in which the pin-making machines are at work. The workmen employed are obliged to enter into a bond, and find two sureties, that they will not disclose anything relative to the machinery. The company prefer keeping their mode of operation a secret in this way to taking out a patent.

Three different descriptions of machines are employed in making hooks-and-eyes,—the wire being let in on one side of the machine, and a completed hook or eye dropped out on the other. The machines appear to make them at the rate of about 100 per minute. About 80 hands are employed, who are said to make 1,200 packs of pins, each containing 3,360 pins, and 2,500 gross of hooks-and-eyes, per day.

The cutlery and file works are conducted on a limited scale. Many beautifully finished knives were exhibited in the New-York Exhibition, and were said to command a higher price than those of a similar class imported from this country.

The artisans are employed principally on piece-work. In the cutlery department one workman will earn $70 (about £14) per month, while the earnings of others occupied on precisely the same kind of work only amounted to $30 (£6) per month.

Thus it will be seen that each workman does the best he can for himself, irrespective of others, and reaps the reward due to his superior skill and industry.

Art. VI.—THE GREAT SOUTHERN CONVENTION AT CHARLESTON.

SIXTH AND LAST DAY.

At 9 A. M., the hour to which the Convention had adjourned, the Hon. Wm. C. Dawson, President, took the Chair.

The Rev. Mr. Breck, of Georgia, opened the session with prayer.

The journal of yesterday's proceedings was read.

The President stated that resolutions would now be in order.

Mr. J. H. Furman, of Georgia, offered the following resolution, viz.:

Resolved, That this Convention cordially recommends to the patronage of Southern men the "Southern Quarterly Review;" a new periodical, "The Self-Instructor," published in Charleston, S. C.; De Bow's Review, published in New-Orleans; the "Southern Eclectic," published in Augusta, Ga.; the "Southern Literary Messenger," published in Richmond, Va.; and all other periodicals devoted to the interests of the South and South-west.

Mr. C. K. Marshall, of Mississippi, moved to amend by adding, "and such other periodicals as are strictly devoted to the objects contemplated by this Convention."

The question being upon the amendment, it was adopted; and the resolution, as amended, was then adopted.

Mr. B. F. Perry, of South Carolina, offered the following resolution, which was adopted, viz.:

Resolved, That the "Southern Quarterly Review," published in the city of Charleston, by a native Virginian, and edited by one of the most distinguished literary gentlemen of the South, being the only periodical of that character printed and published in the Southern States, and having always defended the institutions and interests of the South, is entitled to the patronage of the Southern people, and this Convention earnestly recommends it to their favorable consideration.

Gov. Leake, of Virginia, offered the following resolution, which was adopted, viz.:

Resolved, That the thanks of this Convention be unanimously tendered to the authorities and citizens of Charleston, and State of South Carolina, for the considerate kindness and elegant hospitality with which its members have been entertained during its sessions.

Gov. Leake, of Virginia, offered the following resolution, which was, upon his motion, laid on the table, viz.:

Resolved, That the State of Virginia invite the Southern Convention to hold their next annual session in the city of Norfolk, Va., at such time as may best suit their convenience.

Mr. Ashbury Hull, of Georgia, offered the following resolution, which, upon his motion, was laid on the table, viz.:

Whereas, the objects and aims of the Southern Agricultural Convention coincide with those of the Southern and South-western Convention; and whereas, also, the annual assemblage of each, in an independent organization, is attended with some inconvenience; therefore,

Resolved, That the Southern Agricultural Convention be, and it is hereby respectfully invited, upon such plan as may seem to that body most expedient, to unite with this Convention as one body, in the promotion of Southern and South-western agriculture and commerce.

The orders of the day were then resumed, being the fourth resolution of the third report.

Mr. Nelson Tift, of Georgia, offered the following as a substitute, viz.:

"That one or more railroads, connecting our railroads in the Atlantic and Gulf States with the Pacific Ocean, would promote every interest in the country, and make the United States the receiver and distributor of the commerce of the world; that every movement of our railroads westward is a step towards the accomplishment of this object; and that in the opinion of this Convention, private enterprise, aided by such legislative means as the several States may furnish, and by such grants of alternate sections of land as Congress may grant consistently with the interest of all the States in the public lands, are the most safe and certain means of accomplishing the objects proposed."

Gov. Jones, of Tennessee, addressed the Convention as follows:

He suggested whether it would not be better to ask the President of the United States to open negotiations with the Government of Mexico, to secure a route for this road, and in case of the failure of that, to adopt such a resolution. His reason was this: such a course would do no harm, and would give the South both chances. If a route was secured by the government, it would be more sacred than any that might be secured by a corporation. It was admitted on all hands that a corporation had a right to make a contract with any government; but what right had they to suppose that a contract, thus made, would be respected for a single year, if it suited the purpose of the government, with which it was made to rescind it? Governments had already repudiated contracts again and again. If a corporation were formed, and negotiated with the Government of Mexico for a route, it might happen, before another year rolled round, that the government of that country would undergo a revolution, and the contract, thus made, be repudiated. The instability of that government was proverbial; and what security would such a corporation have? The Government of the United States could not be there to back such a corporation. He thought, therefore, that the Convention ought simply to ask, at present, that the President of the United States institute negotiations for the right of way, and then, if that was not accomplished, let us take all the chances we could, and form a corporation.

Mr. N. D. Coleman, of Mississippi, addressed the Convention as follows:

I am opposed, Mr. President, to the resolutions of the gentleman from Arkansas, as visionary, utterly impracticable, and unmanageable in their details. The plan contemplates a great Southern association of sovereign States to build the Pacific Railroad on the Southern route. The first objection which I urge is, that it is a combination of Southern States only.

We are here in a Convention of Southern, Western, and South-Western States, for commercial purposes. True, I admit that the Pacific Railroad and all railroads, are legitimate subjects of consideration, because they facilitate, promote and advance our commercial prosperity in an eminent degree. It was my deep interest in railroads that brought me here, but I shall advocate no combination of the Southern States into a body corporate, to the exclusion of the Western and South-Western States. It savors of politics, and all political agitation in this body I eschew.

These conventions I approve, because by an interchange of views and opinions, we may improve the agricultural, manufacturing and commercial condition of our country. One of the resolutions contemplates an application to a foreign power for a right of way through its territory. I am a State Rights man, and am so held by all who know me. I am so, sir, because it is a principle, with that class of men, to hold the Federal Government to the exercise of its granted powers only; reserving to the States and the people all powers not granted by the Constitution. The power to negotiate with a foreign nation—to regulate commerce with foreign nations and among the several States, is expressly given to the General Government. Let that government perform its proper functions. I cannot ex-

press the opinion that this Convention shall create a *corporation of the Southern States* with the power to negotiate with a foreign nation. Individuals may contract with foreign countries, and so may associations of individuals. But the States, in their sovereign capacities, have surrendered this power, and therefore should not attempt to create an incorporation of the Southern States for such a purpose.

The plan contemplates a charter by Virginia, authorizing the fourteen Southern States to become parties by subscribing $2,000,000 each, and also admitting individuals, cities, and the Indian tribes, to become stockholders. Will any man, after reflection, say that there is the least probability that any one of the States will come into the measure? My colleague, Mr. T. A. Marshall, has shown that Mississippi cannot. The constitutions of Kentucky and Louisiana, we are told, forbid them from becoming members of the corporation. Other State constitutions, no doubt, have similar restrictions against such bold and reckless appropriations. But, sir, if there were no such obstructions, would any State enter such an association upon a question of policy? Not one of the fourteen.

Sir, how could this institution be managed? By a board of directors, I presume; each State having equal voice. Would not these State officials be obliged to consult their States on all important questions? Must not the Legislatures be convened to give instructions? The machinery of this wild scheme is too heavy, sir; it will fall to pieces of its own weight.

But if individuals and the Indian tribes come in, how much weight are they to have? and how exercised in the management of this grand machine? It is too complicated to work well. If the Convention adopt it, this is the last we will hear of it. Other objections have been noticed by other members, but I shall not repeat them.

Sir, where is the necessity of this new plan, of ponderous and unmanageable dimensions?

There is in existence a charter, granted by the State of Louisiana to the Vicksburg, Shreveport and Texas Railroad Company, which is ample for the purpose. Its capital is only $4,000,000, 'tis true; but it contains a clause authorizing a union of any other road, in extension of the route, through Texas or elsewhere. This charter was obtained for the express purpose of building a railroad across the State of Louisiana, with a view to its extension to the Pacific Ocean, along the line of 32 30 North latitude.

The State has taken one-fifth of the capital stock, $800,000. The company is fully organized, the route surveyed, and *they are ready for operations*, without waiting for the action of the Virginia Legislature, now, or a long time hereafter, to form a new organization. I here exhibit in the hands of Colonel Oakey, a map of this route, in its connections with the railroad system east of the Mississippi, as well as its extension through Texas, New-Mexico, Sonora and California, to the Pacific Ocean, at San Diego. A straight line from this city to San Diego, never north of latitude 33, never south of 32 north latitude. A route that has no obstacles to overcome, no snow or ice to impair its usefulness at all seasons of the year; a route which is the shortest that can be obtained from the Atlantic to the Pacific Ocean, passing through the heart of the cotton region of the United States, identifying the interest of the States represented in this Convention. One of these Southern States, the youngest in the family, by an enlightened policy which cannot be too highly extolled, has recently passed a law, granting twenty sections of her domain for every mile of railroad that shall be made through her territory, beginning at a point on the eastern boundary not north of Fulton, on the Red River, and running west of El Paso, a distance of 750 miles or more. That charter likewise contains a clause authorizing a union with other roads, in extension of the route. At that time there were two roads west of the Mississippi—the Vicksburg and Shreveport road, and

the New-Orleans and Opelousas road—aiming to reach the Pacific, through Texas. I believe, sir, that it is the general desire in Texas, that their road shall connect with the Vicksburg and Shreveport road, as the trunk route, and with the Opelousas and Memphis roads, as branches.

The number of acres granted is upwards of ten millions. It will be worth, when the road shall be completed, ten dollars per acre, or one hundred millions of dollars. But lest some may deem this estimate extravagant, let us suppose it will be worth five dollars per acre, or $50,000,000.

This is a low estimate, for the land is admitted to be fertile, and the climate delightful and salubrious.

Then let us estimate the cost of construction at $20,000 per mile, a very high estimate, the distance is seven hundred and fifty miles, and it will amount only to $22,500,000; leaving a balance in favor of the contractors of $27,500,000, and the road paid for. But, sir, let us suppose the road will cost $40,000 per mile, which is Colonel Abert's estimate, and it amounts to $30,000,000; leaving $20,000,000 in hand, and the road paid for.

Now, sir, this munificent offer is before us; and the Louisiana charter and company are ready for operations.

The Texas contract will be closed by the first of June. We have yet time enough. If the cities of Charleston, Savannah and New-Orleans, the three cities most deeply interested in the Pacific Railroad, will forthwith subscribe $500,000 each in the Vicksburg, Shreveport and Texas Company, and advance $300,000 to deposit in Texas as a guarantee for making the first fifty miles in eighteen months after the contract, the Louisiana Company can bid for the contract, and my word for it, will get it in preference to any Northern company.

After the first fifty miles are made, the $300,000 will be redeemed, and the land for the fifty miles will come to the contractors, and can be sold for more than enough to make the next fifty miles, and so on through the State. But, sir, there will be no want of funds with such a contract and fifty miles of road finished. We can raise funds in abundance, by sale of stock; and the stock will command in any market a premium—a high premium—because it will be worth a high premium.

Here the President's hammer told that ten minutes had expired.

Mr. T. A. Marshall, of Mississippi, addressed the Convention as follows:

He said that this was a subject in which his constituents felt a deep interest, and he trusted that whatever action the Convention might take, it would meet the approval of business men. He did not desire that they should do anything which would subject them to the charge of fostering any "ism." Believing the plan proposed in the resolution now under consideration to be utterly impracticable, he could not see the wisdom or utility of adopting the resolution. Separated as these States were, with different interests, in many respects, although having one general interest, as a whole, it was hardly probable that the fourteen States could be brought to united action within a period of ten or twelve years.

But look at the question in another view. The resolution spoke of the necessity of speedy action; and in view of the importance of speedy action, what difficulties were to be surmounted? They were told the other day, by a delegate from Maryland, that the constitution of that State would prevent the State from entering into any association of the kind. In order, therefore, to have the co-operation of Maryland, her constitution would require to be amended, and that could not be done within a period of ten years.

Then, coming down to Virginia, would any delegate undertake to give a pledge that she would embark in a scheme of this kind?

Would the delegates of South Carolina say that she was ready to subscribe two or more millions of dollars in support of a work which was to

commence seventeen hundred miles from her sea-board, when she had refused to subscribe $750,000 for a work at home?

Then go to Georgia. Would Georgia do so? Did the past experience of what had been done by that noble and energetic State show that she would give her support to a visionary scheme like this? He spoke with all respect of other gentlemen, and did not wish to excite any unpleasant feelings; at the same time he desired to have a fair, free and rational interchange of feelings and views. And would Georgia do a thing like this? And what would Alabama do? She had refused to aid her own works.

Go next to Mississippi, and he was free to confess that she could not undertake a work like this, and for one, he must say that he had no hope, not the slightest hope, of accomplishing such a result as was here contemplated. He had no idea that the people of Mississippi should submit to taxation for the construction of a road a thousand miles west of her borders.

Go to Arkansas, and was it probable that she would subscribe two millions to this end? Perhaps the gentleman from Arkansas (Mr. Pike) might think she would, but he (Mr. M.) could hardly believe it possible.

Then, again, consider the instability of the investment. The money was to be invested for a work in a foreign country having one of the most unstable governments in the world. Go in this way through all the Southern States, and see if such would not be the result. He looked upon the scheme as entirely impracticable.

Judge Nesbit, of Georgia, addressed the Convention as follows:

He was opposed to the scheme of the gentleman from Arkansas, (Mr. Pike.) In the first place, the scheme seemed to him to be utterly impracticable; and was this Convention, which might be said to be a representation of the intelligence and moral worth of the Southern States, to give its approbation to a scheme, and send it forth to the world as a thing to be adopted, when every man of reflection and business talents must perceive that, if not stamped with the character of Quixotism, it at least bore the impress of impracticability? He was no stickler for constitutional scruples. He believed that the Constitution of the United States gave full power for the construction of works of internal improvement; but if he doubted the constitutionality of anything, he doubted the constitutionality of a scheme like this. Could the States colonize? He apprehended not. Could they become owners of real estate in foreign States, without legislation by the United States Government? He apprehended not. He did not mean to denounce this scheme as unconstitutional, but he must confess that he had serious doubts upon the subject.

But he had another objection. The scheme was emphatically sectional in its character. And how was it to be carried out? If the resolutions were adopted this moment he was satisfied that twelve of the States never could be found to unite in the enterprise. The arguments of the gentleman from Mississippi, who last addressed the Convention, were conclusive to his mind, and what a vast theatre would it not open for the power of demagoguism! How many interests would it not have in opposition to it! From his knowledge of the character of the people of the South, he was satisfied a subscription would never be obtained from a single State, without a tremendous popular demonstration against it. You would go before the people of every State, with abstractionist orators *pro* and *con*. Several of the States were perhaps nearly equally divided upon the great question which agitated the South; and how could sufficient suffrages be commanded to insure the corporation? The scheme would invoke all the power of party spirit, of every shade and degree; and the result would be, in nine out of fourteen States, an absolute and unconditional failure.

Now if this were so, did they wish, as sensible men, to adopt a proposition which would be utterly ineffective? nay, worse than ineffective, for it

would stamp the body as "impracticables." Would they ask him to go to his proud State of Georgia—proud in her internal improvements and in her capacity to think for herself—and ask her to lend her aid in an enterprise which he believed never could be carried out? Would they ask the merchants of New-Orleans and Mobile, and Savannah and Charleston, to enter into an *ad libitum* partnership with Cherokees, and Choctaws, and Chickasaws, and other Indian tribes? Why, was it not obvious to every man that there is nothing to which a man looks more closely than the investment of his capital? This was true of every man. And were the States of the Union less wise in their day in reference to money matters than individuals? Certainly not.

And then what about the procurement of this Mexican territory? Could it be obtained? If it could, what would be the position of the States as corporators? Could they trust the stability of Mexican institutions? They were more convulsive than the volcanic regions of the earth, and yet all the money raised and invested by such a corporation would be placed subject to the fate of constantly recurring revolutions of this, the most unstable people in the whole world. How would they secure their rights? Could they make war upon Mexico, in case of a violation of contract? Could they, at the point of the bayonet, compel her to respect their rights? Either they must do that, or they must do what they declared they would scorn to do, become suppliants at the feet of the National Government.

Whatever else might be proposed, he could not give his approbation to this resolution.

Lieut. M. F. Maury addressed the Convention as follows:

Lieut. Maury said he agreed with the gentlemen who preceded him, in their opposition to the details of this plan of a railroad to the Pacific. In his judgment these details not only involved impracticabilities, but they sought to accomplish some of their objects by unlawful means; for instance, the 7th resolution, as had already been remarked, asks that power shall be given by a State to negotiate with a foreign government. No State has the right to give any such power, authority or leave. This resolution also contemplates the maintenance, by the company, of "military posts along said road," thus adding to the tremendous money power, which such a corporation must have, the hideous feature of military power also. He agreed with the opinions expressed upon this subject by the gentlemen from Alabama, Georgia, and Mississippi.

To the mind of the Lieutenant, the details of this plan were full of objections. He had no objections to the *people* of the South agreeing to build this road out of their own resources; but he did object, earnestly, seriously, to any combination or "organization" unlawful.

There was another point to which he would briefly allude, and that was, that he thought the Convention, by adopting the details of this plan, would be arraying itself against, and begetting opposition to, one of the States of the South. He alluded to Texas.

That gallant young State, sympathizing with the Southern feeling with regard to this road, had made the magnificent grant of 10,000,000 acres of land towards it, which was amply sufficient, it was thought, to build nearly one half of this road, or at least so much of it as lies within her borders. Proposals for constructing so much of this road had been invited, and in forty-five days from this time the bids were to be closed, and the contract awarded to that bidder which should offer on the most favorable terms. And the company proposed by the plan before us could not be organized in time to become a bidder for so much road. The Legislatures of the States could not be got together in forty-five days, much less could a charter be granted. The company here proposed, therefore, cannot have the benefit of the Texas grant, or of the Texas route, and it therefore must end

in running a road in opposition to that which Texas has so patriotically and liberally provided for.

And after discussion, participated in by Messrs. Tift of Georgia, Gibbon of North Carolina, Lyons of Virginia, Tilghman of Maryland, Morton of Georgia, Gen. Gadsden, and Gov. Clay of Alabama, the Hon. W. C. Dawson, President, (Lieut. Maury, 1st Vice-President, in the chair,) addressed the Convention as follows:

I beg to detain the Convention but a few moments. This is a question vastly important for us to decide. The proposition is to incorporate a company by States throughout to the Pacific. So far as the power of the States goes, in my judgment, confining themselves to their own limitations, every State, from North to South, has incorporated a company to build a railroad throughout the entire United States. Take, for instance, the railroad from Virginia down the valley of Virginia to Memphis; we all see there is a company incorporated. From Richmond, through North Carolina and South Carolina, to Memphis, Tenn., there is a road. From South Carolina there is one all completed, and from Georgia there is another. Now these companies have their termini, and generally one terminus at the Mississippi. What, then, do you want with an incorporation of States through the States of the Union? Where do all these roads go to? Some point on the Texas boundary, to be designated according to the Texas charter. Will not all these railroads go to that point? and have not all these companies abundant means to carry it there? Is not that true? Can there be any doubt about it? Whether you start from Memphis or St. Louis, or anywhere else, all will converge on the Texas line. Do you want the States incorporated to get there? You are there already. When you are there, do you want the States incorporated to get through Texas? There is the Texas charter, amply complete to carry it to El Paso. Are you not there by all the legislation that Legislatures can give you, and by all the capital the thing can require? I consider the thing as done. When you get to El Paso, then commences your difficulty. What then? You then strike the line designated through New Mexico. New Mexico is a territory of the United States, and the line contemplated runs about three hundred miles throughout that territory. When you get there, can you, by your independent State corporations, acquire an absolute right of way? A right of way from whom? From the United States? Many of us consider that the General Government is bound to build that road But if it should not, what are you to do? Why, call upon the government to give you alternate sections along the line. [Great applause.]

A Delegate.—To which company will you give it?

Mr. Dawson.—To that company, or those companies, which unite and pledge themselves to open the road. Any of those companies may ask the government to give them the right of way and alternate sections of land. These companies can unite under a charter, and commence successful operations, much more easily than you can get the States to unite in a common corporation.

Mr. Polk, of Tenn.—If this proposition is put up for bidding, I would inquire of the honorable gentleman whether the city of New-York alone can subscribe more than five millions of dollars.

Mr. Dawson.—And where is it to be put up for bidding? These companies have the charters to carry it on. These companies will unite and go there, and they will ask the General Government to appropriate them the alternate sections of land to build it, and we of the South have a right to demand it. [Applause.] And there can be no difficulty about it.

Then when you have passed three hundred miles through New Mexico, you strike where? You strike the frontier of Mexico, a foreign and independent country. Now what do prudence and propriety require us to do?

Certainly appeal to that government which has the power to negotiate. Negotiate for what? The right of way through Mexico. And here let me suggest, that if Great Britain, or any other foreign power, desired to run a railway through any one of our States, or through any territory of the United States, would we consider that any State, or any government within the limits of such State, would have the right to negotiate for such a purpose? Or, I will put the case of any State entering into a contract with any foreign power to build a railroad through their country: do you suppose such power would respect such contract, in case of war? Why, to suppose so is sheer folly. But I will not detain you. [Great applause, and cries of "go on, go on."] And supposing that the State making such contract with Great Britain was to violate that contract, and Great Britain was to seek to enforce her rights—this is a mere suggestion, and I do not make it for the purpose of eliciting argument—you know what the consequences would be. [Applause.]

Now, as a Southern Convention, had we not better act upon the principles of our government, than violate them? Let us ask of Congress—and not of Congress alone, but of the treaty-making power, the President and Senate of the United States—to make negotiations with Mexico for this route.

Now, if this line were to run through Sonora, would it be wise to enter into a contract for a right of way for over three hundred miles of road, and depend upon a foreign country to protect the money invested in building the railroad? [Applause.] I am as careless about money matters as most ordinary men, but I would not place my funds in any investment that would be subject to the caprice of any government, and still less to the Mexican Government. Then let us ask our government to do this; and I do think, if that were done, the President of the United States would send a messenger to Mexico, with instructions to carry out this great object, although it may be called a "Northern line," and he a Northern man. I have that confidence in him, that I believe he would do it instantly. And if you should fail in making a government arrangement, you can, if you choose, make a corporation contract with Mexico. [Applause.]

My own judgment is this: that if this Southern route depends upon the assent of Mexico—the surrender of her soil, and the surrender of her jurisdiction over the right of way, and to be placed under the control of the United States—we never will get it. The apprehensions of that Government against us are so strong, that they will look upon us with fear, and deny us common civility. If ever it is done in the world, you may depend upon it that it will be done under the guarantees of treaty, under which the honor of the Government of the United States shall be pledged to exact the fulfilment of the stipulations of such treaty.

Mexico may then do it; but she will never do it if it is to depend upon a contract with a corporation. She will be the only party who will construe the limits of such contract, and may involve us in interminable difficulties, if it is ever done. In such case, your road will be stopped, and hence it is that I concur with my friend from Tennessee, (Mr. Jones) that the General Government be requested to obtain for us that guarantee to which we were entitled, and which we want. That three hundred miles is the only embarrassment. When we pass that, we strike the borders of California; and when we get to California, we might obtain alternate sections of land for the completion of the road in that State. [Applause.]

Now, you may almost say that the roads are built in every direction to El Paso, because the charters are all complete to our Southern boundary on the Rio Grande. Then get a charter through North Mexico, and the right of way through Sonora, and take the alternate sections of land in California, as will certainly be granted by the General Government, together with this

magnificent donation of land by the State of Texas, and not a single dollar more is necessary for this road. [Applause.]

A Delegate.—Is not the right of way guaranteed by the treaty of Guadalupe Hidalgo?

Mr. Dawson.—If that is not sufficient, we will go further, and obtain another guarantee.

Now, you talk about capital. I think I have shown you that there is an abundance of capital, except for the three hundred miles through Sonora. That could easily be raised. It would be raised in one week after the right of way is procured, for the connection would be worth millions on millions of dollars to the company who would construct that line. [Great applause.]

Here the hammer fell.

Mr. Dawson.—I will not detain you further. [Loud cries of "go on," "go on," and "suspend the ten minute rule."

Mr. Dawson.—No: I have said all I desired to say, and give way to other gentlemen.

On motion, the rule was suspended to allow Mr. Albert Pike, of Arkansas, the mover of the resolutions, to reply at length.

Mr. Albert Pike, of Arkansas, then addressed the Convention as follows:

I thank you, Mr. President and gentlemen of the Convention, for the uniform kindness you have shown to me personally, and as a body, since I entered this Convention. I am aware that I have a hard task to fulfil, in answering the arguments of so many distinguished gentlemen, concluded as they have been by one from the President of the Convention; but were they ten times as numerous, and ten times as strong, unless they were better founded in fact and in reason, I should not dread the conflict.

It has been urged that this measure is wholly impracticable. Whenever, in all past history, was there a great scheme propounded, which some men did not declare impracticable? I wish, sir, that I had an army of women at my back, instead of men. [Cheers.] If our forefathers had listened to the objections which were urged when the Constitution uniting these States together in one bond of union was proposed, that great instrument never would have been framed; and our hard-won freedom might have resulted in the direst anarchy. There are difficulties everywhere; every great scheme is surrounded with them; but if we examine fairly into this matter, we will find that these difficulties are mostly to be found within ourselves, and we ought to be ashamed of them. These differences are our rivalries and our jealousies; difficulties as to different points on the Mississippi River for a terminus; difficulties in regard to different notions concerning politics. Of course, no man expects that we will all unite. But in setting forth these difficulties, you tell the North that we are weak, and why should we lay our whole secret open to them? I do not suppose that it is necessary to lay the whole secret of our weakness—if there be weakness—before all the world. Let us say as Richelieu said, "there is no such word as fail." [Applause.] I would not, I assure you, recommend any proposition which would seem to stamp this Convention as "Quixotic and visionary." But if the proposition does not bear that character, then let us try the experiment. Who bids to build the road to the Pacific? We talk and talk about this building of the road, but it is all talk and no plan. We talk about the General Government building it; yet, no one knows how the General Government can build it consistently with your scruples. The President has told us that he considers the road as being already built. I beg to differ with that gentleman, however much I respect his opinions on other matters. We have been told of what can be done by other railroad companies in accomplishing this end; but, from what I know of the condition of many of these companies, I know that it is impossible;

and were I to characterize any scheme by a hard name—which I will not do—then I might say that such a supposition was "visionary and Quixotic." The truth is, that everybody is waiting for some national movement. It has been said that the Vicksburg company could take these Texas lands, and build the road to the Rio Grande. But it is all nonsense; they have not the means.

Then, again, we are all looking to the General Government for aid. You all agree that it is constitutional to make grants of land. Very well. But supposing that the lands were granted, let me tell you that I know something about the country through which this road is to run. It happened to me some years ago to go poking about the head of the Red River on foot, and I know something of the character of that country; the rivers there, although wide, are often nearly dry, and the water found in them at such, seasons is salt, for I dug among the sand with my hands, on one occasion for a whole night to get a mouthful of fresh water, after being without for two days.

We are told about this munificent grant of land by the State of Texas. There may be ten millions of acres of land granted by Texas, yet more than two-thirds of it is not worth a farthing an acre, instead of being, as has been said here, worth $10 per acre. Well, when you have got through Texas, you reach New Mexico. I have been in New Mexico, too. Except the valley of the Del Norte, there is hardly a single foot of land worth a cent in New Mexico, on the line of this road.

The valley of the Del Norte is narrow, with but a small strip of land which is of any value. Then, when you get to the border of California, you travel through another desert. When I was there, in 1832, the hunters were obliged to drive along with them a great quantity of mules, that they might use them as food. So thus you go the greater part of the way through a desert; and unless there are valuable mineral treasures to be found, the lands are not worth anything, and no man would be willing to vest money in their purchase.

Now, these are difficulties which we blink at all the time, instead of looking them fully and manfully in the face. You all say that government has no power to grant money to build a road, and that the only way in which she can help us, is by grants of land. And how much will that help you, if the lands are worth nothing? If the road is to be built, money must be had. It is no use to deny or attempt to conceal it, for

"To that complexion we must come at last."

We might as well say it now, as to say it ten years hence, when it will be too late. Somebody has to advance the means, and the question is, "who is to do it?"

What, then, does this resolution propose? It says, "That in order to make provision for the construction of said road, this Convention earnestly recommend that a Southern organization be effected, if practicable, of the fourteen different States, and of the different cities, and railroad companies and corporations in those States, for the purpose of obtaining the right of way, if necessary, from Mexico." If the President of the United States will obtain the right of way, so much the better; but is it worth while for us to wait until that is done? How, then, is this organization to be effected? I never imagined that all the States would unite—not for a moment. I simply propose that Virginia, as the oldest of the Southern States, should grant a charter, involving a certain amount of capital, to build the road from the point or points indicated in a previous resolution, and then any State, or city, or company might take stock in the road. This charter is to incorporate such persons, States and corporations, as choose to become corporators under that charter. And suppose that no

State should take any stock, would not the charter be living? Some of the States may take the stock, and Northern men, with Northern capital, if they find it to be a paying road, will come and take the stock themselves. How does the only Pacific Railroad Company now exist? Everybody knows that it got its charter from the Legislature of the State of New-York. Now, I want to get a charter also; and, having got it, if the road is not completed under it, it will only show that there is no spirit in the South. There is, therefore, nothing impracticable in the matter, because it does not require the assent of all the States. We do not require that they all unite; yet the plan would be as capable of being carried into effect without the co-operation of a single State, in her State capacity, if the money can be raised.

But it has been said that the legislation of the other States is necessary in order to insure such co-operation. Of what States? Of Arkansas, Louisiana and Texas. These are the only States through which it will run, if it goes through to California; and there is no difficulty about obtaining the needful legislation on the part of these States. I cannot say what Virginia, or Maryland, or any other State will do; but I can only say that if there is a spark of that feeling existing in the bosoms of the different States, which teaches them the doctrine of State sovereignty, and State dignity and independence, they will strain every nerve to carry out this enterprise, in which the interest of the whole country is involved. As for the State of Arkansas taking stock to the amount of two millions of dollars, she cannot do it, neither can the State of Mississippi; but the Legislatures of these States could say to their people, "We invite you to join in this enterprise," and thus, as States, you will give it the weight of your opinion. There is no doubt that the citizens of Arkansas or Mississippi could give each to this road two millions of dollars, if they saw fit. And why should they not do it? If they are to get a portion of the Arkansas lands and the Texas lands, and the railroad stock, as their security, why cannot they, under these circumstances, raise the money? And if the State of Maryland cannot do it, cannot the citizens of that State do it? Sir, the mere recommendation of the several Legislatures of those States would induce the people to join the enterprise, and that is the reason why I ask for a union of the States. There is no difficulty whatever, except in getting men to agree upon any one scheme.

With regard to the location of the road, that can be done when you agree upon the plan. It has been said that there will be difficulties with regard to the directory. I can see no more difficulty in managing such an institution as this, than is to be encountered in any other of a like nature in the State of Maryland, or Virginia, or anywhere else.

Gentlemen have been kind enough to characterise this plan as "visionary and Quixotic." I remarked, at the beginning, that every great scheme that has ever been brought forward for the amelioration of the world has been so characterized; and if all the men who had been the benefactors of the world had been deterred by such representations, their projects would have been thwarted, and this world would be in the same condition that it was in three hundred years ago. [Applause.] It is within the recollection of the youngest man here, that a man utterly without means left this country, some years ago, and landed in France, and attempted to overturn the French Government. He was made a prisoner, and escaped and fled. He was afterwards a deputy constable in the city of London, and was characterized as a hair-brained fellow. Yet he now sits supreme upon the throne of France, and holds the destinies of Europe in his hands. Who would not have called Mahomet a visionary, when he attempted to break down idolatry, and establish a purer system of religion, commencing first in his own family, and then in his immediate neighborhood, until he had spread

his doctrines over half the world? So it was with the founder of the Christian system. It was said, "he hath a devil, and is mad."

Now, if you can convince men that the Texas lands will build the road, and Southern men will not enter into it, then the plan may be pronounced Quixotic. I am willing to admit, that if we had first to obtain the assent of every State, the plan never would succeed. We do not propose to obtain the assent of any one of them. All that we propose is to obtain the charter, and then proceed to distribute the stock as it may be taken.

Again, difficulties have been suggested in regard to getting a right of way through Mexico. Why, sir, if the Government of the United States, in case of invasion, or disregard of our rights by the republic—or, as it now is—empire of Mexico, would not interfere to protect the rights of her own citizens there, and wage war, if necessary, for their enforcement, then I, for one, will cease to be an American citizen, and you may raise your banner of secession, and I will be found fighting under it. [Great applause.] Tell me that you cannot rely upon Mexico? Have you not heard of the Sloo grant? Has not Sloo a contract for building a line across the isthmus of Tehuantepec? Why, every charter that has been granted in Central America for building railroads, and digging canals, and erecting telegraphs, has been granted to foreigners—most of them Englishmen.

And why is it that they take them? Simply because every subject of the British Queen knows that if he makes a contract with a foreign power, the British lion will defend his rights, and the American citizen should also feel that the American eagle will defend his in like manner. [Applause.] Mexico, like every other power, submits to the law of nations. And what is the law of nations? It is the public opinion of the established world. For my own part, I would rather go and buy the right of way, than walk into the halls of Congress and ask them to give. [Immense applause.]

I am opposed to the proposition of the gentleman from Georgia, because it seems to me to be without life or energy. It simply recommends that a railroad should be built. Why, of what use is that? I remember once at a town meeting in Massachusetts, the people resolved that Massachusetts ought to have a railroad. That is exactly as far as the gentleman's resolution goes; but they went further: they said, "resolved that she *shall* have one." [Applause.] And, sir, you may depend upon it, that there never was either a man or a nation that ever did anything great, unless it was done by self-reliance, and I am proud to say, that such I believe to be our national character.

Sir, I said that I wished I had to address a Convention of ladies. I said so, sir, because I never yet knew a lady who had once decided that a thing was proper to be done, who ever looked at difficulties. [Applause.] Whatever may be the difficulties that stare them in the face, they will attempt it; and in my opinion it is better to fail than to halt, not between two, but between fifty-five opinions, until the golden opportunity slips, and we see what fools we were, not to seize upon it when we could have done so.

Sir, it seems to me that we ought to have some plan. If the gentlemen who represent the Vicksburg and Shreveport Road will say that that company will build the road to the Pacific, I will go for that. But what have they to do? They have to go to the Legislature to amend their charter. It is said that we shall lose these Texas lands by waiting. Cannot we go to the Virginia Legislature, when it meets, and get a charter? Why should Texas be willing to sell her lands to Northern rather than to Southern men? Do you not suppose that Texas would prefer to give them to this company? But you must give her some assurance that this company will be formed, or else she will not withhold her lands from market.

As to the constitutionality of the matter, let me say that this is no unconstitutional alliance of the Southern States. I did expect, when I came

here, to have to steer through shoals and around quicksands; but I never apprehended that I should stand under a South Carolina sun, and in the city of Charleston, and insist that the States had a right to combine together for the purpose of building a railroad through this or any other country. The Supreme Court of the United States has settled this question, over and over again. It has decided that a bank corporation in a State is for all legal purposes as a citizen of a State; that a State could incorporate herself, and that when she did so, she ceased to be a sovereignty, so far as the objects of the corporatiou were concerned, and became a mere individual, subject to laws as other individuals. And what is the difficulty, then, about such corporations? Where a State is incorporated for any purpose, it becomes a person, a legal being. It may go to Mexico and buy land, like any other individual. I have a right to do so—you have a right to do so. There is no law to the contrary. There cannot be the least question about the constitutionality of the matter. It is perfectly right and just, and cannot be unconstitutional.

We shall have to talk frankly about this matter, and if such talking does harm, it is not my fault. We do not want this company of Northern capitalists, or rather I might say of non-capitalists—for I do not believe that one man in ten who professed to subscribe to this New-York Pacific Railroad has a single dollar to invest in it—to get our lands in Arkansas and Texas. We do not want a Northern company to have the control of the immense trade which will pass over this railroad. We want Southern men to have it. We believe it would be the greatest source of wealth to the company which completes it, and the best stock the world has ever known; and for myself, I am fully convinced that if each of the Southern States takes two millions of stock in that road, it will enable them, in the course of a very few years, to be entirely free from debt. While a State is poor, she creeps and kneels, and fawns to the General Government. So long as States are dependent, and in debt, they will be humble. When they are rich, they are more likely to have sound political opinions, because in such case they are independent of the General Government. I am for getting the States of the South into that position as quickly as possible, without this thing of begging from Congress. It may be that we are so prone to lie down and feel listless and dependent, that we cannot do it; but if the State of Georgia has built so many railroads; if Maryland has crossed the Alleghany mountains to Wheeling; if Virginia has all her network of roads; and North Carolina and South Carolina, and Tennessee and Louisiana have done so much, why cannot the South, as a community, take up and build the Pacific Railroad? We must have some plan. But it seems to be the order of the day, that when a resolution is brought in with some pith in it, you feel that you must cut it down and prune it and emasculate it, until there is nothing in it, except something begging aid from Congress. Gentlemen seem to imagine that this is a legislative, rather than a suggestive body. Why, sir, the experience of every man must convince him that it is best to claim a little more than he expects to get. The best way for a man to plant his foot upon a place and hold it, is to have a little ground behind him on which to retreat. If you make a mere recommendation to Congress, it is of no use. I can take ten thousand dollars and go to Washington, and get more for the South, than you can obtain by all such resolutions of recommendation, passed in fifty Conventions. [Applause.] Of course, your representatives in Congress will vote for your measures, but that is not all. What then is wanted? I tell you, that if you come together, and do not put your shoulders to the wheel, this will be about the last Commercial Convention that will ever be held, and so it ought to be. [Applause.] I want to go to the Legislature of some Southern State, and say, "Here, charter me this company." If they do not do it, it will do no harm. It will look big. I would open books in

every Southern city. I would address every Southern Legislature, and would then see whether the South could build the road or not. I want to do that, or nothing, because I do not believe that any other plan will succeed.

It seems to me that all our difficulties arise from misapprehension. Why should not we get these lands? If the Texas lands will build the road in Texas, why should not Southern men build it, and have the advantage of it? Suppose now that we had acted upon some such measure as this a year ago, and organized a company, do you not suppose that Texas and Arkansas would have given us the lands? Most assuredly. And what harm would have accrued to the Vicksburg Company? None at all. Could not this or any other company have taken stock, or not, as they pleased? Certainly.

In regard to another point, let me say a word. It has been argued that under such a contract for a road, if it should so happen that this country got into a war with Mexico, the company could not go over the road, it being in an enemy's territory. That is not the law of nations, as was definitely settled in the case of Frederick the Great, in connection with the Silesian loan. If war were to break out, that property could not be confiscated. But there would be no danger of that. We need not discuss all these things; it is a mere illustration of the disposition of large bodies to discuss abstractions. It is the last thing that Mexico would attempt to do. Why, sir, in the greatest emergency, ever likely to arise under such circumstances, I could take the road with 3000 Creeks and Choctaws, and keep it forever. [Great applause.]

I believe, sir, that Mexico would forty times sooner sell the right of way to a private company, than to the Government of the United States. Mexico has no very high opinion of our justice or good faith. They have many intelligent, acute, shrewd men in that country; and they would say, and perhaps with some justice, "If your government will not keep the faith of its treaties with Indians, how will it keep its faith with us?" When they see that, notwithstanding all the solemn guarantees by treaties, pledging the faith and honor of the United States, under the broad seal of the nation, these treaties are violated whenever it suits the purpose of the government to drive the Indian away from his land; when they see grave Senators of the United States rising in their seats, and saying that all these guarantees are to shrink into nothing, like the parchment on which they are written, when consumed by fire, why they think that we are Indians too; and therefore I believe that Santa Anna would fifty times sooner make a treaty with a private company, than with the Government of the United States.

Sir, I am satisfied there would be no difficulty in negotiating for this route, for a reasonable sum, with the Government of Mexico. Look at the rich country of Sonora. Santa Anna knows full well that a railroad would develop the wealth of that country. He knows that a railroad would profit Mexico, as well as any other people, and the Mexicans know that a private corporation will deal honestly with them. For my own part, I do not believe that Santa Anna would charge such a corporation a solitary dollar. On the other hand, if you negotiate through the government, you have to settle all existing difficulties with Mexico, and you may depend upon it that Santa Anna is not going to give away a single foot of land to the Government of the United States, until all other matters are adjusted. But a private corporation could get rid of all these difficulties, by disentangling themselves from them.

Mr. President, in my opinion you will not see in twenty years any treaty giving us this right of way, because there are so many complicated questions that must be settled.

I feel, sir, that I have addressed the Convention too long. I must say, however, that if the Convention refuses to adopt this project, the idea of a

Southern Confederation for this purpose has taken root, and in due time will produce its fruits, whatever may be the action of this Convention. It is the first attempt to see whether we are so dependent on the action of the General Government that we are not capable of combining for the accomplishment of any great work. It is in that view that it has struck the popular heart. It has not appealed to the great Southern feeling, either because of its originality, or because of any merit in its founder, but because it was manly and bold and honest, and would ask the assistance of no one but of honest men and of God. [Applause.]

I want this matter to stand by itself. I have objections to asking Congress to give lands to aid in the construction of railroads. I think they ought to do it; but I do not want it in this resolution; I want it to be a sort of declaration of independence on the part of the South. [Long-continued applause.] We can try the experiment. Is it not worth while to try it? Is it worth while to tell the people of the North that you are so impracticable that you cannot agree upon any plan to promote your best interests?—for it is not the scheme that is impracticable; the only impracticability is in the people themselves.

Let us try it; it will at any rate prove to the North that we are in earnest; and when they find that we are in earnest, they will respect us the more. If you want Congress to do anything in the way of negotiation, it is not the way to obtain it by going on your knees from the footstool of the capitol to the Presidential mansion. No, no. The only way is to say to them, "If you don't do it, we will do it ourselves." [Applause.] Yes, gentlemen, people always get their rights most readily when they demand them.

Sir, the scheme will not fail. It is utterly impossible that out of these fourteen States some will not be found to take the stock. As for the objection about the distance, it is nothing. You are investing stock in steamers to carry mails, not 1,700 miles off, but 17,000 miles off, and subject to every kind of risk. The great difficulty is in ourselves and our own timidity. It often happens, that when a project is proposed, men think they cannot accomplish it, and instead of inquiring whether it is feasible, they set to work to find out why they cannot do it.

Mr. President, if I had time, I intended to address a word or two to the ladies, and I feel compelled to do so, because I received a bouquet of beautiful flowers, with a card, saying that it was presented by the Pee Dee ladies. I thank them for the kindness shown me for the too feeble efforts I have made here. If I had time, I would say a word or two in regard to the influence of women.

In the first place, ladies, I hope you will always be present when such Conventions are being held. We have seen in this Convention that it is not so much that the measures discussed are important, but that there is a spirit of rivalry created by your presence, and an unwillingness to bear defeat. Your influence can be better exercised in the galleries of the Convention, by preventing our disputes from degenerating into quarrels, than in any way I can think of; and I have no doubt that it will often happen that the presence of ladies will go further to make men harmonious and united, and to prevent strife and difficulties, than any other means. I adjure you always to bless us with your presence in Conventions like this. I want you to feel proud of your fathers, and husbands, and brothers. We all want to be proud of ourselves, and when was not a woman in favor of what was manly, and honest, and right? [Applause.]

Do not say that you can have no influence. Remember the time when Maria Theresa went to the camp of the blunt Hungarians with her infant her arms, and said "Behold your king; protect him." That single act of roism saved Austria from dismemberment. Who can tell what would

have been the fate and fortunes of Napoleon Bonaparte, if he had continued to live with his Josephine, and had not sought a courtly alliance? Who knows but that he would have lived out his time on the throne of France; that the battle of Waterloo would not have taken place, and the present European war, perhaps through that very means, have been entirely averted? None can tell.

Why the lives of every one of us may have been produced by an act of heroism. I believe that it was a South Carolina matron (Mrs. Mott), in the war of the Revolution, who presented to the commander of our forces the arrow tipped with fire, for the purpose of destroying her own dwelling, rather than permit it to fall into the hands of the enemy. And there are hundreds here who would do the same. Why, even among the degenerate Mexicans, I have always found the women infinitely higher in their impulses than the men; and in South Carolina there are hundreds and thousands of women who would bring the flaming arrows and destroy their dwellings, rather than permit an enemy to shelter there. [Great applause.]

Help us, then, and teach these timid, dubious men [immense applause], who are faltering in the twilight of dubiety, and hesitating between this course and the other course—teach them to unite with the man the energy of the woman, that you may have a railroad to the Pacific, and secure to your South the victory.

And if you enter into that undertaking, your memories will be more endeared than those of the greatest benefactors of your race. Teach us to do our duty, and the South will be safe. [Applause.] That you will do so in all emergencies, I do not doubt; and I have only now to say, in conclusion, that I have not exhibited too much zeal; that I have not been too positive in my assertions; that I have felt my opinions, and uttered them like any other man; but that I have been solely actuated by a zeal for the cause; for I do believe as sincerely as I believe that I live, and that the light liveth, that this or some similar plan is essential, not only to the wealth, but the security and salvation of the Southern States. [Long-continued applause.]

Mr. Polk, of Tennessee, moved the previous question, which being seconded, the question was, "Shall the main question be now put?" and upon its being determined in the affirmative, upon a call of States, the vote appeared as follows, viz.:

Yeas—Alabama, Arkansas, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Missouri, North Carolina, South Carolina, Tennessee, Texas, Virginia—13.

Nays—None.

Whereupon, the resolution was declared adopted.

The fifth resolution being under consideration, Gov. Chapman, of Alabama, called the previous question, which being seconded, the question was, "Shall the main question be now put?" and upon an affirmative vote, the fifth resolution was put, and adopted.

The sixth resolution being under consideration, Gov. Chapman, of Alabama, called the previous question, which being seconded, the question was, "Shall the main question be now put?" and upon an affirmative vote, the sixth resolution was adopted.

The seventh resolution being under consideration, Gov. Chapman, of Alabama, called the previous question, which being seconded, the question was, "Shall the main question be now put?" and upon an affirmative vote, the seventh resolution was adopted.

The eighth resolution being under consideration, Gov. Chapman, of Alabama, called the previous question, which being seconded, the question was, "Shall the main question be now put?" and upon an affirmative vote, the eighth resolution was adopted.

The report was then adopted.

Mr. Duncan, of Georgia, offered the following resolution, which was adopted, viz.:

Resolved, That California be invited to unite in this organization.

The fourth report of the Committee on Resolutions was then taken up.

Mr. Ruffin, of Virginia, moved an indefinite postponement of the whole subject, and called thereon the previous question, which being seconded, the question was, "Shall the main question be now put?" and upon the call of States, the vote appeared as follows, viz.:

Yeas—North Carolina, South Carolina, Virginia—3.

Nays—Alabama, Arkansas, Florida, Georgia, Indiana, Kentucky, Louisiana, Maryland, Mississippi, Missouri, Tennessee, Texas—12.

Mr. Polk, of Tennessee, moved to lay the 1st resolution of the fourth report on the table until Saturday next; and upon the call of States, the vote appeared as follows, viz.:

Yeas—Alabama, Arkansas, Georgia, Maryland, North Carolina, South Carolina, Tennessee, Texas, Virginia—9.

Nays—Florida, Kentucky, Louisiana, Mississippi—4.

Which was declared carried.

Upon the second resolution, after discussion participated in by Gov. Jones, of Tennessee, Messrs. Kirkpatrick, of Virginia, and Tift, of Georgia,

Mr. Tift, of Georgia, moved a suspension of the order requiring the Convention to adjourn at 3 P. M., which was carried.

The discussion was then further participated in by Governor Leake, of Virginia, Messrs. Fitzpatrick, of Alabama, T. A. Marshall, of Mississippi, and Clapp, of Mississippi.

And the question recurring upon the second resolution, it was declared not adopted.

The third resolution was then adopted.

The fourth resolution was adopted.

The fifth resolution was adopted.

The sixth resolution was adopted.

The seventh resolution was stricken out.

It was moved that the preamble and first resolution be reconsidered; and upon a call of States, the vote appeared as follows, viz.:

Yeas—Alabama, Arkansas, Georgia, Maryland, North Carolina, South Carolina, Tennessee, Texas, Virginia—9.

Nays—Florida, Kentucky, Louisiana, Mississippi—4.

The question being then upon the preamble and first resolution, by leave of the Convention, they were withdrawn.

The fourth report, as amended, was then adopted.

The fifth report was then taken up for consideration.

The first resolution was, by permission, withdrawn, a committee being charged with the preparation of such report.

The second series of resolutions were then adopted.

The preamble and resolution relative to the Portland Canal being under consideration, Lieut. M. F. Maury addressed the Convention as follows:

Lieut. Maury begged to state a single fact with regard to this canal. To get to it, as it now stands, the commerce of Louisville was subjected to heavy drayage—21 cents, for instance, on a barrel of pork, and for this one item alone, the aggregate drayage amounts to about $75,000 a year.

The tonnage which passed through this canal during the last year was greater than the aggregate tonnage of the commercial marine of Great Britain—being no less than five millions of tons. That is about the tonnage of the whole world.

And the preamble and resolution were then, by permission, withdrawn.

The fourth resolution was then adopted.

The fifth resolution amended, by adding "and South-Western" after "Southern."

The sixth resolution was then adopted.

The seventh resolution was then adopted.

Mr. William M. Lawton, of South Carolina, offered the following resolution, which was adopted, viz.:

Resolved, That this Convention recommend to the citizens of the respective States here represented, the importance of holding a fair, for the exhibition of their numerous productions of industry, specimens of every description in mechanical skill and art; thereby inviting a cordial and generous spirit of circulation. The time and place for holding said exhibition to be decided upon by a majority vote of the General Committee of this body.

Mr. Patrick Henry Aylett, of Virginia, offered the following resolutions, which were adopted, viz.:

Resolved, 1st, That among the measures auxiliary to the important objects we have in view, this Convention cannot but regard as of deep interest and importance the adoption of the proper means for introducing Commercial Education among the youth of our country—the training them up to habits of business, and thereby establishing a body of merchants whose every interest and feeling shall be identified with the country which has reared and sustained them.

Resolved, 2d, That the Convention recommends to the Legislatures and citizens of the Southern States, the ample endowment of universities, colleges, and other scholastic institutions, for the purpose of extending their advantages and usefulness; and it also respectfully solicits the visitors and boards of trustees for such institutions of learning, to discriminate in the election of all professors and other teachers in favor of Southern talent and education.

Resolved, 3d, That we recommend the creation, patronage, and encouragement of establishments for the publication and sale, in the Southern States, of elementary books of education—the productions of Southern men, prepared with express reference to the proper education of Southern youth.

The Committee on Resolutions returned sundry papers, which had been referred to them, and asked to be discharged from their further consideration; and on motion, the Committee was discharged.

Mr. John Heart, of South Carolina, offered the following resolution, which was adopted, viz.:

Resolved, That the thanks of this Convention be and are hereby tendered to the Hon. Wm. C. Dawson, for the dignity, ability and impartiality with which he has presided over the deliberations of this Convention.

On motion, the following resolution was adopted, viz.:

Resolved, That the thanks of this Convention be tendered to the Secretary and Assistant Secretaries, for the faithful manner in which they have discharged their duties.

Mr. Drew, of Florida, offered the following resolution, which was adopted, viz.:

Resolved, That the Committee appointed by the second resolution of the report of the General Committee, to prepare statistics, &c., be also instructed to obtain, and report to the Secretary, the statistics on the milling and lumber trade, as carried on by the respective States represented in this body; as well also as the statistics of agriculture in the same States.

Sundry resolutions relative to the place at which the next Convention should be held were then taken up,

And after some remarks from Mr. Albert Pike, of Arkansas, the resolution to meet at Louisville, Ky., was withdrawn.

The next resolution, being to meet at Norfolk, Va., upon the putting of the question, was declared lost.

The question then recurred upon the resolution to meet at New-Orleans, La., which was adopted.

The time of meeting was, after some discussion, fixed for the second Monday in January next.

Mr. Dent, of Maryland, offered the following resolution, which was adopted, viz.:

Resolved, That the warmest and most cordial thanks of each member of this Convention are due, and are hereby tendered in the most earnest manner to the citizens of Charleston generally, and to the various committees of Charleston connected with this Convention especially, for their unbounded and untiring kindness, and their most munificent and elegant hospitality, and for their unremitting attention to the comfort, pleasure and enjoyment of this Convention.

Mr. Clapp, of Mississippi, expressed the acknowledgments of the Delegation from Mississippi to the people of Charleston for their hospitalities.

Mr. C. K. Marshall, of Mississippi, offered the following resolutions, which were adopted, viz.:

Inasmuch as the cause of Education is of the first importance among growing and enlightened States, and the proper instruction and training of the rising generations in the Southern and South-Western States demand our especial care and attention:—therefore,

Resolved, That this Convention looks with peculiar gratification upon the prosperous condition of the several State institutions, and the praiseworthy exertions of the different Christian denominations in the cause of education within the States here represented; and hereby tenders to them its grateful recognition of their momentous work, and the remarkable success which has crowned their toils.

Resolved, That this Convention earnestly recommends all parents and guardians within these States, to consider well, that to neglect the claims of their own Seminaries and Colleges, and patronize and enrich those of remote States, is fraught with peril to our sacred interests, perpetuating our dependence on those who do not understand and cannot appreciate our necessities and responsibilities; and at the same time fixing a lasting reproach upon our own institutions, teachers and people.

Resolved, That among the most important measures necessary to the success of our educational interests, is the establishment, by the Southern and South-Western States, of normal schools, for the free admission of such persons, of both sexes, as may wish to devote themselves to the profession of teachers, within their borders; and this Convention respectfully solicits the attention of the Governors and Legislatures of these States to the importance of this subject.

Resolved, That this Convention respectfully recommends to the Legislatures of these States the importance of encouraging the production, by their own citizens, scholars, printers and publishers, of such school books as may be necessary for elementary and generul education, by the offer of suitable prizes for the best books of different classes, to be decided upon by appropriate committees, appointed to judge of their merits; such books always to be printed and published in the South.

Resolved, That a Special Committee, consisting of Henry A. Griswold, of Louisville, Ky.; J. J. McCarter, of Charleston, S. C.; J. B. Steel, of New-Orleans, La.; David Cushing, of Baltimore, Md.; and William T. Berry, of Nashville, Tenn., be appointed a committee by this Convention, to prepare a report, to be published with the proceedings, upon the Book trade of the South and West, embracing such statistical facts in regard to the publication and manufacture of books, both literary, scientific and instructive, as are adapted to the school system, and the general wants of the South and West, and report at their earliest convenience, to the Secretary of this body.

Resolved, That the President of this Convention appoint a committee of three gentlemen to prepare and present a memorial on the subject matter of these resolutions, to the consideration of the Legislatures of the Southern and Western States.

On motion, it was *Resolved*, That all the Committees ordered to be raised by the action of the Convention, be appointed by the President.

Governor Jones, of Tennessee, offered the following resolution, which was adopted, viz.:

Resolved, That the thanks of this Convention are due, and are hereby tendered to the different lines of travel which have facilitated the rans portation of delegates to this place.

Governor Clay, of Alabama, offered the following resolution, which wa adopted, viz.:

Resolved, That the thanks of this Convention are due, and hereby tendered to the Editors and Reporters of newspapers, who have so generously and ably facilitated our labors on this occasion.

On motion, the Convention then adjourned.

WILMOT G. DE SAUSSURE, *Secretary.*

The final resolutions of the Convention have already been published in the REVIEW. The names of the several Committees are hereby appended, with the confident hope, that the reports of each will be ready for the next meeting of the Convention at New-Orleans, on the second Monday of January, 1855.

Committee on Statistics of Manufactures, Mines, &c., viz.:—J. D. B. DeBow, of Louisiana, *Chairman*; William Crichton, Thomas T. Hutchins, John F. Dent, Maryland; Thomas Wallace, William H. Macfarland, Mordecai Cooke, Virginia; Dr. J. H. Gibbon, E. D. Hale, James A. Patton, North Carolina; W. B. Johnson, Alexander McBee, Joseph Walker, South Carolina; Thomas C. Nisbet, Nathan C. Monroe, John J. Gresham, Georgia; Benjamin F. Whitner, Columbus Drew, C. A. Price, Florida; Dr. Charles H. Patton, Daniel Pratt, Alfred Battle, Alabama; J. W. Clapp, Andrew Matthews, T. A. Iredell, Mississippi; J. Forstall, A. Dimitry, Louisiana; Albert Pike, Arkansas; Dr. Alexander McCall, Samuel Morgan, A. W. Van Liew, Tennessee; A. L. Shotwell, T. S. Kennedy, B. D. P. Standeford, Kentucky; John S. Rea, Texas; James M. Clendennin, W. H. Blackwood, Missouri; Hamilton Smith, Indiana.

Committee on Promotion of Manufactures, Mining, &c., in Southern and Western States, viz.:—Aaron V. Brown, of Tennessee, *Chairman*; T. Tilghman, C. C. Baldwin, C. F. Montague, Maryland; W. F. Gordon, O. G. Clay, Edmund Ruffin, Virginia; J. A. Young, D. G. McRae, John Eccles, North Carolina; James Chesnut, R. F. W. Allston, C. G. Memminger, South Carolina; Mark A. Cooper, John Cunningham, Dr. M. A. Franklin, Georgia; B. A. Putnam, J. W. Bryant, B. E. Carr, Florida; L. C. Garland, John S. Winter, J. G. L. Huey, Alabama; T. A. Marshall, R. H. Crump, J. W. Clapp, Mississippi; E. G. W. Butler, H. J. Ranny, J. A. Brand, Louisiana; John S. Rhea, Texas; Albert Pike, Arkansas; Benjamin Deckard, William H. Sneed, Tennessee; John Funk, E. Auchins, Frank Roulhac, Kentucky; W. H. Blackwood, Jas. M. Clendennin, Missouri; Hamilton Smith, Indiana.

Committee on Pacific Railroad Scheme, viz.:—Albert Pike, of Arkansas, *Chairman*; Thomas Whitridge, of Maryland; James Lyons, of Virginia; John Winslow, of North Carolina; Henry W. Conner, of South Carolina; C. J. McDonald, of Georgia; W. D. Moseley, of Florida; Dr. Thomas Fearn, of Alabama; N. D. Coleman, of Mississippi; S. W. Oakey, of Louisiana; John S. Rhea, of Texas; John H. McMahon, of Tennessee; Leslie Combs, of Kentucky; W. H. Blackwood, of Missouri; Hamilton Smith, of Indiana.

Committee on Mail Service, viz.:—John Heart, of South Carolina, *Chairman*; J. H. McMahon, of Tennessee; Nelson Tift, of Georgia; Theo. O'Hara, of Kentucky; H. K. Arthur, of Mississippi; F. A. Lumsden, of Louisiana; C. C. Fulton, of Maryland; C. C. Danley, of Arkansas; W. Richardson, of Texas; P. H. Brittan, of Alabama; Thomas Loring, of North Carolina; Charles A. Rose, of Virginia; Charles E. Dyke, of Florida; A. B. Chambers, of Missouri; Schuyler Colfax, of Indiana.

Committee on Direct Trade, viz.:—Myer Myers, of Virginia, *Chairman*; Dr. Mallory, Norfolk, Va.; Joshua Jones, Thos. Swann, Baltimore, Md.; B. K. Dickinson, A. J. DeBossett, jr., Wilmington, N. C.; Geo. A. Trenholm, C. T. Mitchell, Charleston, S. C.; George Daniels, Hiram Roberts, Savannah, Ga.; Wm. R. Hallett, Wm. A. Dawson, Mobile, Ala.; Samuel J. Peters, John B. Leefe, New-Orleans, La.; Lewis Webb, James Caskie, Richmond, Va.

Committee on Book Trade of Southern and Western States, viz.:—Henry A. Griswold, of Louisville, Ky.; J. J. McCarter, of Charleston, S. C.; J. B. Steele, of New-Orleans, La.; David Cushing, of Baltimore, Md.; William T. Berry, of Nashville, Tenn.

Committee to Memorialize Southern and Western States on Education, viz.:—C. K. Marshall, Mississippi, *Chairman*; George S. Bryan, of South Carolina; Ashbury Hull, of Georgia

Art. VII.—FINANCES OF CHILE, AND HER FOREIGN COMMERCE.

THE LOTA AND CORONEL COAL MINES—FINANCES—THE FOREIGN AND INTERNAL LOAN, ETC.

THE coal mines in the south, which promise to furnish an important article of commerce for Chile, were first worked in 1851, by but a few hands and inefficient machinery, but have nevertheless yielded 6,000 tons during the year 1852.

The first experiment to use them for steam purposes was made in April, 1852, on board the Chile war steamer Cazador, by Mr. Hurtado, commander of the vessel, who published in the papers the following account:

STEAMER CAZADOR,
ANCUD, *March* 18, 1852.

Let this steamer's first engineer inform respecting the quality and durability of the coals taken from the mines of Lota Creek and conveyed on board as an experiment.

MIGUEL HURTADO.

To the Commander of the Steamer Cazador.

SIR—I find that the Lota coal is superior in quality to all foreign coal that can be got at present on the coast of Chile. For arriving at this conclusion, I have the following reasons:

1st. That a smaller quantity is required for consumption.

2d. That this coal gives no ashes.

3d. That in 24 hours, only two buckets full of dross have been taken out the furnace.

4th. That it is harder, and burns more easily.

5th. This is all I have to state in compliance with the anteceding order.

MAURICE BRUNET,
ANCUD, *March* 19, 1852. *First Engineer.*

This statement, in which the writer speaks of the quality of Lota coal, was much exaggerated. The Coronel coal, which at present is generally preferred, is said to be of a more desirable quality for steam purposes, resembling the English coal, and with the aid of English machinery, and a sufficient number of men, the yield of this article will form a considerable item for home consumption, and also for export, being well adapted for the saltpetre works, but it does not make sufficient heat for smelting minerals.

The Coronel Mines are at present worked by Messrs. Casino and Garland, the head of the Flour Association; and these gentlemen have orders for all they can deliver at $6 per ton, laid alongside the vessel. There is no doubt that in the same vicinity many more valuable mines will, ere long, be opened to advantage. Those worked at present give employment to about eight

hundred persons. The English coal being at so low a price, and the quality of Chile coal not sufficiently known here, have caused that the recent arrivals of this article have met with an unfavorable market.

From the tables and statistics presented in these sketches, a favorable conclusion will be formed regarding the financial state of the country. In connection with this, we find that in 1848 the Government was not over punctual in remitting funds to Messrs. Baring Brothers of London, to cover the interest due to Chile bondholders, and they had to buy silver bars on credit at the high rate of ten dollars and five reals, pledging part of the revenue in prospectus. The Exchequer, according to the statement of the Minister of Finance, was reduced to $34,980, and was owing $153,600 in London, besides the sum of $92,314 to the Mint and deposits.

The new branch of trade to California, however, had soon an invigorating influence on the finances of the country, and in latter years regular remittances were made in advance, and even the revolution of 1851, which cost the Government more than one million of dollars, did not impoverish the Treasury. The Custom House revenue of 1849 amounted to $2,206,802, and the entire revenue, including realizable Government property of two millions, $134,000 owing by the English agent, and $500,000 deposits, amounted to $6,761,150, and the expenditure to $5,627,384—a decided improvement within a year, the English agent being a debtor; whereas, in the previous year, Chile was in arrears with $150,000, and showed an entire deficit of $500,000. But much more wonderful must these facts appear, when we consider that in the year 1838 the revenue of Chile amounted to $1,300,000, and the expenditure to $1,966,948. The net revenue in 1850, without taking government stock and deposits into account, amounted to $4,334,314, and the expenditure to $3,610,837. The revenue, therefore, surpassed the expenditure $723,477.

To give the reader an idea how this revenue is raised, I affix a table of the different branches forming the above amount:

Custom House	$2,627,442
Tithe	363,552
Land Tax (Catastro)	83,632
Patents (Patentes)	46,516
Excise (Estanco) Government monopoly on Tobacco and Playing Cards	718,777
Mint	389,820
Stamps	74,216
Sundries	83,359
Total	$4,334,314

In 1852 the Custom House revenue exceeded that of 1851 by

one million, principally caused through the activity of industry and increased commerce. This large increase of revenue can, however, not be depended upon for 1853, the particulars of which will be published in June next, the imports of 1852 having been so much larger than usual, owing to the cessation of business during the civil war of 1851. The annexed tables, being a comparative statement of the revenue of 1851 and 1852, show an increase in almost every branch excepting the mint. This is accounted for by the large quantity of silver having been coined during that period. The entire revenue of 1852, however, shows an increase of $1,173,572 above 1851.

COMPARATIVE STATEMENT OF THE REVENUES.

	1851. Entries.	1852. Entries.
Custom House	2,729,506 29	3,465,038 77
Excise	735,565 43	783,652 33
Land Tax	71,542 56	98,622 77
Property Tax	137,103 64	197,933 37
Patents	45,301 00	55,778 00
Stamps	47,279 00	64,436 86
Tithe	375,267 09	526,940 25
Mint	117,797 75	97,101 69
Post Office	61,537 48	70,328 57
Toll	62,479 87	62,914 10
Auction Dues	4,033 29	6,063 29
Sundries	39,493 84	51,955 15
	4,426,907 18	5,480,480 15
Comparation		4,426,907 18
Increase of Entries in 1852		$1,053,572 97

	1851. Decrease.	1852. Increase.
Custom House	—	735,532 48
Excise	—	47,696 90
Land Tax	—	27,080 27
Property Tax	—	60,834 73
Patents	—	10,477 00
Stamps	—	17,157 80
Tithe	—	151,673 10
Mint	20,696 06	—
Post Office	—	8,791 09
Toll	—	434 28
Auction Dues	—	8,030 90
Sundries	—	12,461 31
	20,696 06	1,074,269 05
Comparation	—	20,696 08
Increase of Entries in 1852		1,653,572 97
Interest of the Peruvian Debt of $2,000,000, first and second dividend		120,000 00
Total		$1,173,572 97

Chile enjoys an excellent credit abroad, and whilst the bonds of almost all South American republics were considered dead stock, those of Chile were sought after of late, owing to the punctuality in the payment of interests, and in the annual redemption of part of her debt, which has advanced Chile stock in the London market to 104.

This External or Anglo-Chilean Loan of one million sterling was contracted in May, 1822, in the time of the war of independence against Spain. In consequence of this war and the unsettled state of the country, Chile was unable to pay the interests for many years, until, in the year 1844, the Government commenced paying interest on the original capital only. In the year 1842 an engagement was entered into by the Chilean Chargé d'Affaires in Paris with the English holders, and it was agreed that the interest owing since 1822 should be converted into three per cent. stock, payable from the 31st of March, 1847, with one per cent. added for a sinking fund.

In 1850, after the redemption of a number of bonds, the debt was reduced to $7,465,000, leaving in circulation

7835 six per cent. bonds, at £100	$3,917,500
7695 three per cent. bonds, at £100	3,547,500
	$7,465,000

The interest paid by the government in 1850 on this sum, including sinking fund, loss on exchange, expenses for remittances, commission, etc., amounted to $551,830. This amount included a further augmentation of the sinking fund, together with the one per cent. employed for that purpose, so that the six per cent. debt will be cancelled in 1869, and the three per cent. in 1877. A further payment was made in 1851, amounting to $652,050. When arranging for the payment of interest in 1842, the Government agreed, through Messrs. Baring Brothers, not to raise another loan until the present one is cancelled.

Since the war of Independence, Peru owed Chile four million dollars, and has at last recognized her debt. Though the Chilean Government had given Peru full power to arrange the payment of the interest on this debt, through their Agents in London, in the most favorable manner possible, they did not avail themselves of it, but placed two million dollars of the new six per cent. loan of thirteen million dollars, raised in London, at the disposal of the Chilean Government, which secures so much of the debt, in case of the credit of Peru being shaken in consequence of their internal troubles, and the anticipated war with Bolivia.

The internal debt, which is held by a few capitalists, and is scarcely ever offered in the market, amounted, in 1853, to $1,561,309, viz.:

LIQUIDATION OF THE CONSOLS OF CHILE.

Three Per Cent. Consols, registered to the end of 1852		$1,909,200
Redeemed up to the 7th of October last	342,825	
This date at 12¼, 30¼	5,075	347,900
Remain in circulation		$1,561,300

Since then the Government raised a loan of $500,000 at 8 per cent. for the erection of Custom House Stores, giving security to the bondholders in a claim upon the stores; this amount, however, cannot be added to the internal debt, because the Government make a considerable profit on the operation.

Art. VIII.—PROPOSED CHANGE IN THE DIPLOMATIC AND CONSULAR SYSTEM OF THE UNITED STATES.

[A few months ago we published an article upon this subject, which has since been receiving the attention of Congress, and will, no doubt, be carried into practice at the next Session. The following, taken from the report of the Hon. John Perkins of Louisiana, will show how radical are the changes contemplated by the State Department and the Committee on Foregn Affairs of the House:]

Without dwelling on the importance to the United States of properly organized diplomatic and consular establishments, and the repeated efforts in the early history of our government to secure them, your committee have thought that a brief review of the operation of the existing systems for the last twelve years —from 1841 to 1853—with a simple statement of the provisions of the proposed bill, would be the best argument in favor of its adoption.

On the 1st of July, 1841, the United States had full missions at London, Paris, St. Petersburgh, Berlin, Vienna, and Mexico; a resident mission at Constantinople; *chargéships* at Madrid, Lisbon, Naples, Turin, Brussels, the Hague, Copenhagen, Stockholm, Rio de Janeiro, Chili, Peru, and New Granada.

In the latter part of the year 1841, the mission to Brazil was raised from a *chargéship* to that of a minister plenipotentiary, and in 1842 the full mission to Spain re-established. In 1843 the mission to China and the *chargêship* to Buenos Ayres were established. In 1845 the mission to Austria was reduced to a *chargéship*, and the commission to the Sandwich Islands established. In 1848 a full mission was authorized to the then so-called German empire, and *chargéships* established to Ecuador, Bolivia, and Central America. In 1849 a full mission was created to Chili, and that to the German Empire discontinued. During the

last session of Congress the missions to Central America and Peru were raised to the first grade, and a resident mission to Switzerland established.

There are twenty-eight legations of the United States in foreign countries. Ten of these, at the opening of the present Congress, were represented by ministers plenipotentiary, two by ministers resident, fourteen by *chargés d'affaires*, and two by commissioners.

The ministers plenipotentiary receive, at the time of their acceptance of their appointments, outfits of $9,000 each, and annual salaries of $9,000. One of the ministers resident receives a salary of $6,000, and the other an outfit of $4,500, and $4,500 salary. The *chargés* receive outfits of $4,500 each, and salaries of $4,500. One of the commissioners receives $9,000 outfit and $9,000 salary, and the other $5,000 salary. Each of our representatives in the diplomatic branch of the public service is allowed an infit equal to three months of his annual compensation.

We have also ten secretaries of legation with salaries of $2,000 each, a dragoman with $2,500, and an interpreter with $2,500.

The expense of conducting our foreign diplomatic intercourse for the twelve fiscal years terminating on the 30th of June, 1853, amounted to $3,656,204—an annual average cost for that term of $304,683 66.

The proposed bill elevates all United States missions to the grade of envoy extraordinary and minister plenipotentiary, and provides a secretary for each. Representatives below this grade are, by the mere etiquette of the rank, restricted in their influence with the government to which they are accredited. The letter of credence of a *chargé d'affaires* is addressed merely to the minister of the foreign department, and the presentation of the bearer of it to the sovereign or chief of the State is a matter of courtesy. In the case of a full minister, the presentation is a matter of right. A *chargé d'affaires* requests, a minister may demand, an audience. At the more fastidious courts, the admission of a *chargé* to the royal presence is regarded as a favor to his government. The false position in which this places a representative is not only a humiliation to himself, but the occasion often of serious inconvenience to his nation. If important objects are to be accomplished with the cabinet, the good will of the ruler greatly facilitates them, and this can be best secured by personal intercourse. In his social, as in his official intercourse, the representative less than a minister is likewise subjected to embarrassments. Regarded merely as a functionary, with no higher or other duties to perform than the taking care of the archives of his country, ministers plenipotentiary from the

smallest States enjoy superior consideration, and take precedence of him in society.

The bill provides a secretary for each legation, and this is required both by the services to be performed and by prudential considerations. Without such an officer, the absence of the minister from his post, even temporarily, through illness or other cause, leaves the government without representation.

The existing system of outfits to our foreign representatives does not accord with the principle upon which other public servants are compensated, and by the bill it is abolished. It has proved unequal, if not demoralizing, in its operation. It pays for services in advance of their performance. A minister may ask for his recall whenever he chooses; and if he has served but one day as such, he cannot be required to return to the treasury his outfit.

There are instances where, in the space of four years, ministers to comparatively unimportant courts have received $18,000, and in one case $22,500 in outfits. Of the $3,656,204 which our diplomacy cost for the twelve years ending the 30th of June, 1853, the sum of $596,500 was drawn for outfits.

The scale of compensation provided by the bill to our ministers and secretaries has been graduated to correspond with the importance of the duties to be performed, and the expense of living at the respective capitals. It is desirable that the salaries of our representatives abroad should be liberal without being extravagant.

Our diplomatic establishment, if remodelled in the manner and with the salaries indicated, will cost annually $320,500—only $15,816 34 more than the average cost for the last twelve years of outfits, salaries, and contingent expenses. Although the number of our legations has been considerably augmented, and several of them raised, since 1841, it is thought that our foreign intercourse may be conducted for twelve years, commencing with the 1st of July, 1853, in the manner proposed, for a sum not larger than that expended for the twelve years preceding that day.

Our consular establishment is imperfect. It is defective in most important particulars. Repeated attempts have been heretofore made in Congress to remodel its provisions, but without success. All the great interests of the Union more or less connect themselves with its agency, and require its improvement. Some of our consuls are better compensated than any officers of the government, while by far the greater number receive nothing like just remuneration for the services performed. This inequality the bill proposes to remedy by discontinuing the system of compensation by fees, and the substitution of salaries. In important commercial ports, and in large manufacturing dis-

tricts, consuls are not to be permitted to transact business. The withholding from them of this privilege is necessary to prevent undue advantages in trade over their countrymen.

In ports with which we have but little commerce, and in interior places where there is comparatively no exportation to the United States, they may carry on business. Those from whom this privilege is withheld are provided with higher salaries than those not excluded from trade, but without any distinction of grade.

We have at this time but one consul-general commissioned as such, and by the bill he is reduced to an ordinary consul. In countries where consuls are not received, commercial agents are to be appointed.

The salaries proposed by the bill to consuls and commercial agents, prepared with much care after consultation with the State Department, are considered just, and called for by the public interests.

The amount of fees received at all our consulates in 1852, (the returns for 1853 not being complete), according to the reports of the State Department, was $153,196 19; to this may be added $24,300 for the salaries, clerk-hire, house-rent, and contingent expenses during the same year of the consulates at London, Basle, Constantinople, Alexandria, Smyrna, Beirut, Candia, Fuh-Chau, Amoy, Shanghai, and Ningpo, making the cost of our present consular establishment $177,496 19 per annum; that of the one under the proposed bill will be $252,750.

It is not thought advisable to discontinue the exaction of fees for consular services, but to modify the charges authorized. At present consuls may charge $2 for any act authenticated by the consular seal. From this law it is proposed to exclude *visés* of passports. The existing law affects unequally ship-owners in the deposit and delivery of ships' papers, for which two consular certificates are required. A vessel of thirty tons pays as much as one of three thousand tons. By the bill this service is charged for by the registered measurement of the vessel. At present an invoice of merchandise of $25 value pays the same for a consular authentication as an invoice of $25,000 value. This is made by the bill to conform to the amount of the adventure when it is above $100. The commission allowed to consuls, where salaried, for advances to distressed seamen, are discontinued. Returns of fees are to be reported quarterly to the Treasury Department, and a failure to comply in this particular is made a cause for removal from office.

The cost of the diplomatic service of Great Britain, exclusive of special agencies and contingent disbursements, amounts annually to £127,805, about $568,022 22: that for the diplomatic and consular service of the United States under the proposed bill will amount to $573,250.

SUMMARY.

By the bill proposed there will be—		
Ministers		28
Commissioner		1
Secretaries of legation		28
Dragoman		1
Interpreter		1
Consuls not permitted to transact business		88
Consuls permitted to transact business		69
Commercial agents		4
Aggregate amount of salaries of ministers ($262,500) and secretaries ($47,000)	$309,500	
Commissioner to Sandwich Islands	6,000	
Interpreter to China	2,500	
Dragoman to Turkey	2,500	
Aggregate cost of diplomatic service as per bill proposed		320,500
Aggregate amount of salaries to consuls not allowed to transact business	$191,500	
Aggregate amount of consuls permitted to transact business	58,750	
Commercial agents	2,500	
Total amount of expense for consular service as per bill proposed		252,750
Diplomatic service		320,500
Total cost of diplomatic and consular services		573,250
Aggregate cost of proposed consular establishment	$252,750 00	
Deduct fees, which amounted in 1852 to $153,196 19		
Contingent expenses of sundry consulates 24,300 00		
		177,446 19
Net cost		75,253 81
Annual expenditure required by the proposed bill for diplomatic service will be, over that of the existing system	$15,816 34	
The annual expenditure under the proposed bill for consular service will be, over that of the existing system	75,253 81	
Total increase of expenditure under the proposed bill, over that of the existing system	$91,070 15	

Art. IX.—CUBA AND THE SOUTH.

[The author of the following article is an intelligent citizen of New-Orleans, and expresses the views of a large part of the Cuban sympathizers. He belongs to a school somewhat more "*progressive*" than our own, though a good way short of the stature of "Young America."]

BELIEVING from my heart that the question of Cuban independence is one of momentous import to the people of this Union—the most important in result to the world—and to the

South, a question freighted with the issue of life and death, and willing to contribute in directing to this subject the attention of gentlemen of our own State, and of those sister States linked to us by a common destiny, you will, I am sure, pardon me that I have chosen this mode of communication.

The scales have at last fallen from the eyes of our citizens as to the scenes being enacted near us, and we begin to regard with serious attention measures which threaten disaster to our own land, and endanger that interest which is to us, in this portion of the Union, a vital one. We behold how the insidious action of England and France, having in view the emancipation of the slaves in Cuba, has at last, by an outside pressure, impossible to be resisted by the weak and enervate government of Spain, forced her to the bold and destructive measures which are now being consummated.

All admit the necessity of action, but it is as to what manner of action is best calculated to achieve the end in view, that is of the chiefest importance in this matter; and it is to this point that the Cubans, and the friends to the Cuban cause, would ask the attentive consideration of Congress, the Government and the people. No true friend of Cuba will for a moment desire any hostile action at this time, on the part of the United States, towards Spain. It is the opinion of the Cubans, and of our most substantial and influential men here and elsewhere, favorable to this cause, that such a step would be destructive of every hope for the salvation of Cuba. The first gun fired by an American ship of war on the coast of that island, would be the signal for the sacrifice of all property of the Creoles, and all this accomplished by a simple decree, which it is as well known at Washington as here, the Captain-General is authorized at his discretion to promulgate. The United States, taking the island after the promulgation of such a decree, would hold but a worthless wreck. A crown robbed of its jewels, would be all that they would gain by such unfortunate action. Taking it too in such condition, they could never again return the savage and brutal population to their servile state, for this, if no other reason, that the fanaticism of the North would rear the banner of civil war to prevent such a consummation. All the Compromise and Nebraska Bills in the world would not create such discussion and distraction. A contest would commence, which would end but in the dismemberment of the Union.

The plan of acquiring Cuba by purchase, if not obnoxious to all the objections which attach to its acquisition by conquest, yet many of these, applicable in the latter case, apply with equal force in the former; with this insuperable objection on the part of the Southern States, that it would introduce into our Union a State burdened with such decrees as have been

already ordained, as well as such as might be hereafter enacted by the existing government, respecting the *status* of the negro, between this and the date of the purchase. All these the power purchasing would be compelled to maintain and to carry out. All of these are and would be at war with a proper administration of the domestic policy of the South.

This question, however, will never arise. Spain will never sell Cuba. It is not probable that her overweening pride will be drowned in her avarice, when so large a portion of the purchase money will go to her creditors, and not into the pockets of her corrupt administration.

No. If we get Cuba, we must get it in another way; and the road is open. Let but the United States Government hold off, and Cuba will free herself in a short time. So long as the government of Spain has to deal only with a domestic foe, she will be confident in her strength to quell the revolution, and will not, we may hope, discover her error, until too late to remedy it; but the attack of so powerful an adversary as the United States will, on the very first hostile demonstration, bring down the decree. If we acquire Cuba, we must acquire her as we acquired Texas.

The Cuban revolutionists would have it understood by gentlemen in Congress, by the Administration, and by the people, that what they seek is Cuban independence—not annexation; at least, not now. Those who would go to aid them, would claim to go to assist a people already in a state of moral revolution—known to be so, by irrefragable proof. They would go, with the sinews of war supplied by Cuba herself. They would bear over the arms necessary to accomplish their liberation, for they are without them. Imprisoned, manacled—their chains must be broken. With a bayonet bristling at every man's bosom, an unassisted outbreak, before help from without should arrive, would be sheer madness.

But, it is asked, how and where have they evinced a desire to be free? They have evinced it by a long and continued struggle, moral and physical, which is wonderful, when we contemplate the position of the Creole in Cuba.

They evinced it in 1823, when a commission from the island went forth to ask aid at the hands of Gen. Bolivar.

They evinced it when the Congress of American States, held at Panama, in 1826, listened to their pleadings, and when the instructions to our own representatives to that body smothered the measure.

They evinced it in 1828, when the foundation of the Order of the Black Eagle, a powerful organization, was discovered, and suppressed by the Government.

They evinced it when they united with General Lorenzo, at

St. Jago de Cuba, in 1836, for the purpose of proclaiming in Cuba the Spanish Constitution.

They evinced it by an imperfect plan of revolution, which failed in 1848, and by the ill-fated expeditions of 1850 and 1851, when a band of our gallant countrymen were murdered under circumstances of so much ruthlessness and barbarity—whose blood cries out aloud from the ground, even now, for vengeance; when that gallant and ill-fated general who led them paid the forfeit of his daring with his life. But he has not died in vain. "The blood of the martyrs is the seed of the Church." Future generations of his enfranchised countrymen will revere him as a hero, and the dark-eyed daughters of his "beloved Cuba" will deck his grave, as a hallowed spot, with the fairest, freshest flowers, and his memory will live ever in the hearts of his countrymen.

They have evinced their desire to be free, in 1854, by their untiring efforts to direct public sentiment in this country to the matter of their condition and their desires; by the accumulation of the means of war, in the midst of dangers actually incomprehensible to an American mind. They have done more than Poland, Hungary or Italy; for they have shown a disposition to assist themselves in a practical, sensible manner, in accordance with the difficulties which surrounded them, and in the only manner in which success can be accomplished.

The friends of Cuba who, from this country, would endeavor to assist her, will, I am sure, scrupulously avoid any violation of the neutrality law—a law which is a libel upon our free institutions—a similar law to which, we believe, is not found in the code of any other civilized nation. It is a mockery of our Constitution—an ovation from obsequious Republicanism to courtly Royalty. Kossuth and Mazzini may plan the liberation of their countrymen, and plot against oppressive governments in monarchical England, but in republican America it is criminal, and the suspected parties must be annoyed by the means of the government, squandered in shameful and ineffectual prosecutions.

View this question, if you will, in a national light. It is the first outpouring of American feeling from the great valley of the West, which must sweep before it the rotten and tottering fabrics the absolutism of the Old World has set up in the New. It is the first crusade of the people against the *divine right* sacrilegiously claimed by imbecile king-craft. Our people *do*—the Government *must* sympathize with it. The existence of an island peopled by a race of intelligent men, so ready for the reception of, and so imbued with American ideas, with a social institution identified with that of all the Southern and South-western

States, and this race ruled simply by the force of the bayonet, is, in this age, an anomaly too monstrous to be borne.

Of this people a large number have been educated in American schools. Many Cuban youths are now being educated here. These all return fully imbued with American ideas. Shall we, who have taught them, now blame them that would follow our example, and raise themselves from a state of serfdom to be freemen? The march of free opinion is step by step, as are the inductions of mental philosophy.

Look at it as a commercial question, and the necessity of a change in the political condition of the Island of Cuba appeals with an irresistible power to the mercantile mind of this country, and to that of the commercial world. See how our commerce is harassed by an island so governed, guarding the mouth of the mightiest river in the world, whose shores are bordered by the rich States of the West, and bearing on its bosom their untold wealth—this land governed by a jealous, unfriendly and pusillanimous power, whose only aim seems to be, to embarrass all intercourse with us—tampering with our national honor, just so far as they may believe their weakness will be their protection—vaunting with the boldness of a braggart, and trembling with the trepidation of a coward—driving, by high and excessive duties, all our products from her markets, when the articles we produce are those they most need—our citizens insulted even as the Creoles themselves! How long would England or France endure a condition of things like this? How long would they have suffered such an incubus to have existed at the outlet of even their petty rivers, weighing down their commercial advancement, and not have removed the cause? Let Cuba be Africanized, and then with another San Domingo blocking the mouth of the Mississippi, all we can do by internal improvements will help us little. Our seas will be divested of ships, and those white-winged birds of commerce will fly to other oceans, or furl their pinions, and droop upon our waters.

Lastly, and chiefly, it is as a Southern question that this subject demands the calm and attentive consideration of the people of the South and the South-west. We well know that a feeling is rife at the North antagonistic to the institution of slavery—a feeling which is extending amongst many even of their men of education and liberal feelings. They make the same error which has lain at the bottom of this false philanthropy since its beginning (for slavery is much the older of the two); and this error lies in regarding the negro as a white man—in speaking of him and arguing of him thus. This is their chiefest error, and the germ of all their fanaticism. Although I believe the Union will endure so long as it is the interest of both sections of our

country to be united, yet this fatal idea festers like a cancer at its heart, and may eat it up. The safety of the South is to be found only in the extension of its peculiar institutions, and the security of the Union in the safety of the South—towards the equator. The great beauty of our system of government is in its power of expansion. An hundred States may be governed under such a system as well as a few.

It was a prevailing feeling when our Colonies had, by their united efforts, achieved their independence, that they should lose their recollection of their former separate positions as individual States in the greatness of the result achieved by their Union. This idea was a natural one: we and our fathers have been educated in it, and we seem to view our federal as a centralized government, rather than as a federation of independent States, linked together by a league, offensive and defensive, with a common purpose of free government; a common interest in commercial prosperity; a common protection in war, and advancement in peace. A more enlightened view is beginning to prevail and extend among the people, as its necessity increases, and the philosophy of our system is properly considered.

New fields for a restless and enterprising population will demand all the energy and labor of the land; and in the blessings and in the returns of an unlimited commerce, the superfluous sympathies of our Northern brethren would be absorbed. Thus would the bonds of interest be drawn the closer together between the North and the South, and their union be the more thoroughly cemented. With Cuba, an island seven hundred miles long, and capable of sustaining such an increased population, assimilated to our own in their government, what a splendid prospect of commercial eminence opens to the South! What wealth will float upon our waters! What a bright gem will she, "the Queen of the Antilles," be in the coronet of the South, and how proudly will she wear it!

It is the greatest question of the age. Let our statesmen meet it boldly. Let them meet it as Americans. Already has the boom of cannon rolled along the shores of the Bosphorus, and the red fire of battle brightens the waters of the Baltic. It is the beginning of the end. It is the sound of the struggle of despot with despot; and while the strife goes on, Freedom will raise her bowed head, and the down-trodden people, brutalized by ages of oppression, will rise in the rude majesty of their ungovernable might; and terrible will be the rising thereof. The seeds of liberty, it seems, must be sown in blood, even as man's redemption was purchased by its price.

Art and action have conquered time. The work of years in former times is now the accomplishment of a day. Almost with the rapidity of light are the principles of free government

—*American principles*—penetrating the dark holes of European despotism.

Progress is King. At his step thrones are shaken, the monarch trembles, and with pale lip and blanched cheek beholds the impending storm; before his breath "that divinity which doth hedge a king" fades as a thin mist. The phantom of kingly prerogative flees away, and all the pomp and pageantry of courts wastes to the empty show of a pantomime.

Down-trodden man walks boldly upright in God's sunshine, and looks human majesties calmly in the face, and political equality is a truth realized.

What, then, will America do? What will the United States, the centre from which these rays diverge, be willing to contribute to the cause of Freedom and humanity? Will she, while absolutism wars with itself, stand like a sentinel on a hill to perpetuate the existence of the worst despotism on this continent which exists on the face of the whole earth? Will she forge the fetters for men striving to be free, or rivet the chains already fastened on their limbs? I trust not. It is one thing to keep your faith; and it is another thing for a man or nation to wreak a wrong on humanity by stepping beyond what is pledged to or required of it.

Art. X.—RECLAMATION OF SOUTHERN SWAMPS.

Utterly valueless in their present state for tillage purposes as these lands are, the poisonous property which they communicate to the atmosphere is a perpetual source of disease and death. If effectually drained and embanked, the soil of the delta of the Nile or Mississippi would not surpass them in fertility, or perhaps equal them in the variety of fruits which they would be capable of yielding. Health, too, would probably reign where pestilence now abides. Why, then, has an enterprise of such transcendent importance, in all its relations, never been a theme of profitable public dsicussion? The abundance and superior adaptation of the high lands for cotton, and the comparatively small expense in preparing them for that crop, was originally the main cause. As often as a field of this character furnished evidence of deterioration, the axe was put in requisition, and another, new and untried, substituted. The expensive and ruinous process has been carried to so inordinate a length, that the continued cultivation of poor tracts would seem to prove that, in the judgment of the planter, all the high grounds of value had been occupied. If this were true, which I deny, there is no alternative but to restore the productive power of the exhausted soils, or to render available the

lands of which one of the elements has deprived us. The latter scheme, it is asserted, is impracticable, as the descent in the swamps is insufficient to draw off the water; and even if practicable, the expense of the undertaking would not repay the cost. Both of these opinions are untenable. Actual surveys of the Edisto swamps of the middle and eastern sections of the State by another,* show that in relation to the former—the least valuable†—the smallest descent in the lowest of them is not less than 3 or 4 inches to the mile, and in most of them from 12 to 18 inches; and with regard to the latter, that the fall is obviously sufficient for the purpose desired. Concerning the outlay, perhaps it is only necessary to remark, that if the value of the rice lands of the river-swamps, and most of our inland swamp, be a correct criterion by which to estimate the worth of the best of the reclaimed low grounds of the State, it would be repaid ten thousand-fold, and probably by the product of two or three crops, if not one only. Surely what has been achieved in other regions can be successfully done here, where so many advantages and incentives conspire to aid us. Your notice is not directed to Egypt, where dykes have converted a morass, 270 miles in circumference, into a vast field regularly yielding two crops within the year; nor to Holland, one-third of which has been recovered from the sea by mounds, some of which are 63 feet thick; and where at this time it is in contemplation to drain Harlaem Lake, embracing an area of 1500 miles; nor to India, the river banks of which country are said to be 1000 miles in length; nor China, where two of her finest provinces have been banked in from the sea; nor to Great Britain, where millions of acres of exuberant soil have supplanted the pestilential morass and the quaking bog. To our own country and State we ask you to look. In the levee at New-Orleans, art has effected a triumph over nature which, in its physical and political consequences, is still inadequately appreciated. Where will you find a more perfect work for the purpose it accomplishes than our rice plantations exhibit? The result, too, of individual energy.‡

To the public, in the absence of data on which to predict an opinion, an extended scheme of reclamation appears too hercu-

* Mr. Ruffin.

† The swamps on the Edisto, says Mr. Ruffin, from their narrowness—hence requiring extensive embankments—would be difficult to be secured from freshets; and as the Edisto passes through a sandy country, and does not therefore make the same rich deposits as the Congaree and Santee, the swamp lands of that region would be less valuable than the latter

‡ The highest evidence of the capacity of individuals of even moderate means to arrest and divert the channel of rivers by stable barriers, examined by the writer, is found in the Parish of St. Stephens. The embankment is 4¼ miles long, 40 feet base and 11 feet high, and was constructed by the venerable Samuel Porcher. This work will be regarded as an endeuing testimonial of the sagacity, skill and indomitable perseverance of its projector. The reclaimed land has produced as high as 70 bushels of corn and 40 bushels of oats per acre.

lean a task to be undertaken. If, however, the judgment of scientific witnesses may be relied upon, the difficulties are apparent, not real. A canal in the lowest ground, they maintain, having a properly directed course, though but 10 feet wide and 5 deep, if always operating, would gradually and regularly draw off the waters, which, obstructed as they now are, may flood many thousand acres; and there are indeed but few, if any of the larger inland swamps, of which a main canal of double this width, at most, would not serve to remove the surplus, and heretofore injurious waters, and perhaps at the same time furnish good navigation in times of abundant water, if not always. It may, then, be assumed, that the drainage of the large extent of high swamp (not subject to tide), in the lower range of districts, is not only practicable, but would be cheap compared to the immense value to be gained. We have especially in view, however, such swamps as the Biggin, the source of Cooper, and Wassamasaw, the source of Ashley River. It might here be pertinent to add, that all these swamps are underlaid, and at but a few feet below the surface, with the richest marl of our country, so that the canals deep enough for the main drains would, through nearly all their course, penetrate this rich bed. If a proper estimate were put upon the marl, the expense of excavating the canals, it is not improbable, might be compensated by the use and sale of that great meliorating agent. The construction of the Santee Canal, merely for navigation, and upon a high level, it is now obvious, was an injudicious measure. If that work did not exist, another might be made on a lower level for much the greater portion of the distance, and through rich swamp land with marl below, and by combining three objects, be as profitable as the actual plan has proved otherwise. The two great swamps already alluded to are connected, and both very nearly, with similar land on the Santee. The canals necessary and proper for drainage would completely connect, as well as greatly extend, the navigation of the Cooper and Ashley, and both with the Santee, by cutting through higher ground merely for navigation. In like manner the Edisto might be connected with the Ashley; and independent of the other advantages, the now difficult and hazardous rafting down the Edisto to Charleston would be avoided, and a shorter and safe passage secured. In the belief, however, that such a work might, at some future time, seriously impair the value of, if not destroy, the rice grounds below, the Legislature at its last session rejected a proposition to incorporate a Company to execute it. The general features which distinguish the Biggin and Wassamasaw Swamps prevail through most of the swamps above tide water, in Charleston District, if not elsewhere. While their drainage, therefore, would, in effect, add many thousand acres of the very best land to lower South Carolina, it would, at the same

time, execute a network of canals of almost level and open water. What would be the effect of these extended reclamations of swamps in removing or lessening diseases of a malarial origin, is much less capable of appreciation. Nevertheless, the opinion is, perhaps, well founded, that the curse of our State—the only great physical evil—is capable of being controlled by wise legislation and agricultural energy.

The river swamps, subject to inundation by the freshets of the rivers, present a much more difficult subject for improvement. It is on such lands as the Santee, Congaree, Wateree and Peedee, that the only extensive and successful trials have been made to reclaim swamps. While each of the enterprising proprietors acts solely in reference to his own land, and frequently in error as to that, and there is no general and consistent plan of operations, it must happen, that one private embankment serves to obstruct some other; and if all were to attempt to bank out the floods, their height and force would necessarily be rendered so much the greater, and perfectly uncontrollable. The plan heretofore pursued by the undertaker is to embank his swamp land along the river side, as near as may be. If, then, the work be completely effective for his own purposes, still he has obstructed the passage, and thereby more or less increased the height of all future freshet. Should his opposite neighbor deem it advisable to follow his example, and both their dykes approach near to the river side, then, instead of the floods having a breadth of two or three miles of swamp to flow over, they would be confined to the narrow bed of the river. It is manifest that the open water would rise until high enough to surmount, or sweep away the obstructing dykes. * * *

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With regard to many of our inland swamps, and generally the low grounds of the State, the soil of which has been used as an element in the composition of manures, the intelligent farmers are fast yielding to the opinion, that it is in every respect better to abandon that practice, and to render these valueless tracts available capital, by drainage and appropriate earthy or mineral ingredients.

Most of the inland swamps of South Carolina are of inexhaustible fertility. While the soil is generally a black mud, averaging probably three feet in depth, sometimes ten, and rarely under two feet, the substratum, with few exceptions, is sand and gravel, on which account it is more easily drained and kept free from water, though it is susceptible of perfect drainage when resting on clay, if it be a foot or two below the surface. Between the sea-board and Columbia thousands of acres—but inferior in productive capacity to similar tracts immediately below the Falls of Savannah River—are to be seen in the cypress

ponds, bay galls and creek swamps, which cover, perhaps, half the State below the ridge. The experiments of our most enterprising planters go far to establish the belief that these lands, or the better class of them, are capable of yielding average crops, including the first year, for an indefinite period, of 400 lbs. of clean short cotton per acre. The cost of bringing them into cultivation may be estimated from the following statement: By one individual,* from 150 to 165 acres were last year put into tillable condition, at an expenditure for drainage of 1,733 days' work, to which he afterwards probably added sixty-six more; and for felling timber, burning, fencing, &c., 6,813 days' work of all sorts of hands. Under different circumstances and management, it is believed that 1,000 days of ditching, and and nearly 5,000 days of work of all hands, could have been saved—in a word, that such land may be prepared for the hoe, at a cost, in labor, of $25 per acre.† Manuring at the rate of from two to three hundred bushels to the acre, would of course add much to the expense. With such encouraging facts before them, it is almost unnecessary to observe, that if our people, especially those of the lower country, would embark, each according to his circumstances, in draining, clearing and marling this emphatically pestilential region, they would do more to develop the agricultural capacity, add to the wealth, and improve the health of the State, than by any other application of their labor and time.

Although private enterprise is supposed capable of accomplishing much on this head, yet, in relation to the river swamps, it would be comparatively powerless. Where the concurrence of many wills is required, and landed property, from the operation of our laws in regard to intestates, is constantly changing owners, or multiplying their number, the difficulties of united action are almost insurmountable. If legal aid could be so far brought to facilitate the undertaking, as to produce uniformity, in order that the labors of one should not counteract those of another, a very formidable impediment in the way would be removed. To require and compel the combined action of proprietors, would constitute a more decisive act on the part of the Legislature, that could not, however, be dispensed with. In the Code of Louisiana, where such a power is given, the most signal benefits to individuals and the public have already accrued from its practical exercise.

* Ex-Governor Hammond.

† The grubbing was not included, as it belonged to the crop work.

Art. XI.—NEW-ORLEANS PRODUCE RECEIPTS.

A Table showing the receipts of the principal articles at New-Orleans, from the interior, during three years ending 31st August, with their estimated average and total value, compiled from the New-Orleans Price Current, by the United States Economist.

Articles.	1852.		1853.			1854.		
	Amount.	Value Dollars.	Amount.	Av'ge.	Value Dollars.	Amount.	Av'ge.	Value Dollars.
Apples, bbls	20,350	61,068	48,328	3 00	144,984	47,451	4 00	189,804
Bacon, assorted, hhd. and casks	46,734	3,505,050	50,347	70 00	3,524,290	37,664	55 00	2,071,520
Bacon, assorted, bxs	3,620	126,910	4,009	30 00	120,270	9,931	20 00	198,620
Bacon, hams, hhd and tc	38,188	2,694,120	42,868	65 00	2,786,420	32,155	50 00	1,607,750
Bacon, in bulk, lb	281,280	28,502	134,300	0 07	9,401	121,000	0 06	7,260
Bagging, piece	60,044	780,572	64,144	13 00	833,872	45,263	14 00	633,682
Bale rope, coils	90,272	677,040	121,553	8 00	972,424	102,274	8 00	818,192
Beans, bbls	6,598	65,980	9,494	7 00	66,668	13,459	5 00	67,295
Butter, kgs and firkins	44,786	358,288	44,444	6 00	266,664	47,649	7 00	333,543
Butter, bbls	1,778	53,340	2,184	28 00	61,152	1,93	30 00	58,020
Beeswax, bbls	171	7,695	194	50 00	9,710	161	50 00	8,050
Beef, bbls	41,227	494,724	48,565	13 00	631,345	29,700	13 00	386,230
Beef, tcs	11,523	172,845	30,226	18 50	559,181	10,301	20 00	206,020
Beef, dried, lbs	26,100	2,088	18,900	0 8½	1,606	31,601	0 09	2,844
Buffalo robes, pkg	1,300	97,500	17	75 00	1,275	12	80 00	960
Cotton, bales	1,429,183	48,592,222	1,664,864	41 00	68,239,424	1,440,779	38 00	54,749,600
Corn meal, bbls	2,514	7,542	1,788	3 00	5,364	35	4 00	1,420
Corn in ear, bbls	163,008	114,106	17,620	0 25	13,215	48,404	0 90	43,563
Corn, shelled, sacks	1,397,132	1,176 558	1,225,031	1 30	1,592,540	1,740,267	1 50	2,610,400
Cheese, bxs	72,448	253,513	39,497	4 00	157,988	58,132	4 00	232,528
Candles, bxs	53,936	323,616	68,796	6 50	447,174	72,298	7 00	506,093
Cider, bbls	300	900	36	3 00	198	89	3 00	267
Coal, Western, bbls	850,060	425,030	700,000	0 50	350,000	1,000,000	0 60	600,000
Dried apples and peaches, bbls	804	4,020	2,237	4 00	8,948	7,353	5 00	36,765
Feathers, bags	2,065	72 275	2,042	40 00	81,680	1,377	50 00	68,850
Flax-seed, tcs	519	5,190	1,279	8 00	10,232	192	9 00	1,728
Flour, bbls	927,212	3,708,848	838,672	4 50	3,639,024	874,256	7 00	6,119,792
Furs, hhds, bundles, and bxs	2,136	1,000,000	739	—	300,000	1,048	—	400,000
Hemp, bales	17,149	257 235	17,648	17 00	300,016	19,992	30 00	599,760
Hides	123,687	247,374	101,460	2 00	202,920	112,489	2 25	253,100
Hay, bales	53,434	160,302	175,000	3 00	525,000	72,664	4 00	290,656
Iron, pig, tons	62	1,860	121	40 00	4,840	515	40 00	20,600
Lard, bbls and tcs	125,496	3,137,400	118,243	26 00	3,074,318	133,065	24 00	3,193,560
Lard, kgs	157,689	788,445	159,672	5 50	878,196	110,477	4 50	497,146
Leather, bundles	7,572	189,300	6,309	50 00	189,270	5,690	35 00	198.150
Lime, Western	42,305	52,881	33,838	1 25	42,297	21,390	1 50	32,085
Lead, pigs	267,564	856,204	210,287	4 00	841,148	74,296	5 00	371,480
Lead, bar, kgs, and bxs	1,138	22,760	157	25 00	3,925	210	30 00	6,300
Lead, white, kegs	1,368	4,104	725	4 00	2,900	544	4 00	2,176
Molasses, est'd consump., gals.	18,300,000	4,026,000	25,700,000	0 20	5,140,008	31,000,000	0 12	3,720,000
Oats, bbls and sacks	463,273	347,454	446,956	1 00	446,956	586,451	1 00	586,451
Onions, bbls	17,184	34,368	17,718	2 00	15,240	22,893	3 00	68,679
Oil, Linseed, bbls	758	19,708	508	30 00	35,433	539	32 00	17,248
Oil, Castor, bbls	4,291	120,148	4,742	38 00	180,196	2,438	35 00	85,330
Oil, Lard, bbls	14,114	395,192	14,685	82 00	469,920	14,298	35 00	500,430
Potatoes, bbls	428,095	456,190	204,337	2 00	408,654	206,273	2 00	412,546
Pork, tcs and bbls	276,606	4,425,696	316,592	14 00	4,432,288	249,188	12 00	2,990,256
Pork, bxs	303	10,505	2,074	30 00	62,220	15,206	28 00	425,768
Pork, hhds	2,478	198,240	2,547	70 00	178,290	1,750	65 00	113,750
Pork, in bulk, lbs	800,000	616,000	12,985,810	0 6½	844,077	12,646,600	0 05	632,330
Porter and Ale, bbls	406	41,060	1,140	10 00	11,400	1,770	10 00	17,700
Packing Yarn, reels	2,093	14,651	2,811	7 00	19,677	2,443	7 00	17,101
Skins, Deer, packs	998	24,950	420	30 00	12,050	305	30 00	9,150
Skins, Bear, packs	16	240	29	45 00	435	4	15 00	60
Shot, kegs	2,704	67,600	2,233	30 00	66,000	3,675	24 00	88,200
Soap, bxs	5,318	15,924	6,911	3 00	20,733	9,173	3 50	32,105
Staves, barrel	7,319	278,122	6,000	40 00	240,000	2,500	37 00	92,500
Sugar, estimated crop, hhds	236,547	11,827,350	321,931	48 00	15,452,688	449,394	35 00	15,726,840
Spanish Moss, bales	4,372	35,976	3,702	10 00	27,020	4,466	15 00	66,990
Tallow, bbls	1,307	26,140	1,318	24 00	31,632	371	30 00	11,130
Tobacco, Leaf, hhds	75,816	5,686,200	63,260	100 00	6,326,000	36,405	80 00	2,912,400
" Strips, hhds	11,741	1,467,625	10,050	130 00	1,306,500	10,600	120 00	1,272,000
" Stems, hhds	2,118	42,360	1,700	20 00	34,000	1,900	23 00	43,700
" Chewing, kgs & bxs	4,779	95,580	10,886	25 00	272,150	4,617	25 00	115,425
Twine, bundles and boxes	2,341	18,728	4,544	8 00	36,352	3,902	8 00	31,216
Vinegar, bbls	92	552	242	6 00	1,452	422	6 00	2,532
Whiskey, bbls	146,352	1,097,640	138,515	8 00	1,108,120	128,925	10 00	1,289,250
Window Glass, bxs	19,251	48,127	13,408	3 00	40,224	24,857	3 00	74,571
Wheat, bbls and sacks	64,918	129,836	47,238	1 75	82,766	184,943	3 00	554,829
Other articles, estimated at	—	5,500,000	—	—	6,000,000	—	—	6,000,000
Total value—dollars	—	108,051,708	—	—	134,233,735	—	—	115,336,798

The aggregate for eleven years have been as follows :—

AGGREGATE VALUE OF RECEIPTS OF PRODUCE AT NEW-ORLEANS FOR SEVERAL YEARS.

1842	$45,716,045	1847	$90,033,256	1851	$106,924,083
1843	53,728,054	1848	79,778,051	1852	108,051,708
1844	60,091,716	1849	81,989,692	1853	131,233,735
1845	57,199,122	1850	96,697,873	1854	115,336,798
1846	77,193,464				

Art. XII.—AMERICAN CITIES.—MILWAUKIE, WISCONSIN.

STATISTICS OF THE CITY OF MILWAUKIE FOR THE YEAR ENDING MARCH 1, 1853, WITH AMOUNT OF PRODUCE IN STORE MARCH 20TH, 1853 AND 1854.

THE Committee intrusted by the Board of Trade with the task of collecting and compiling statistics relative to the commerce and manufactures of the city of Milwaukie, as well as the various enterprises, both existing and projected, which tend to promote her interests, beg leave to submit the following report :—

In the commencement, they would say that much care has been exercised, and several weeks have been spent in collecting the figures below, which may be relied upon as being as accurate as the nature of the case will admit. That portion relating to the manufactures of the city has been obtained by visiting almost every manufactory of the articles enumerated, even the most retired and insignificant. As some of the articles of manufacture have doubtless been omitted, the aggregate may be considered as really above the amount stated below.

As regards exports, the amount of produce in store, and the lumber trade, the figures have been taken from the books of forwarders, ship-owners, and dealers, individually, and are as complete as possible. From the negligence of captains of vessels in filing their manifests, and the impossibility of their being gathered by the Collector, the Custom House books present a very imperfect idea of the lake commerce of the city. For the same reason, it is impossible to ascertain with any kind of accuracy, (without visiting every merchant in Milwaukie,) the imports of various kinds of merchandise during the year; we have therefore omitted them altogether.

Wisconsin, during the past year, has been unusually productive; crops of most kinds have been larger in quantity than in any year since its first settlement. Although a larger proportion than usual has gone to other lake ports or to the Mississippi for shipment, yet the figures below show that a large region continues tributary to Milwaukie, and that the cash paid by this city to producers must have been greater than in any previous year. From the extraordinary yield, a lively business was an-

ticipated during the fall, winter and spring of 1852-'3. High prices were general throughout the country. Farmers reaped a rich harvest, but a large proportion was absorbed by mortgages on their farms, which checked expenditures by them in improvements or in luxuries. The late decline, however, in provisions and breadstuffs, while it does not immediately affect the farmer, who has marketed his products, falls heavily upon buyers in all the principal marts of the West. It was anticipated in the autumn of 1852, that the stock of merchandise on hand on the 1st of March would be extremely light. This anticipation has not been realized, and there still remains enough to supply all probable demands before the arrival of spring stocks.

Notwithstanding these unfavorable circumstances, Milwaukie and the State of Wisconsin, owing to restored credit and internal improvements, which are bringing in foreign capital, are in a condition many fold more flattering than for the past four years.

It is proper here to allude to the water power of this city, which is now one of the chief sources of our productions. At Humboldt, four miles from the city, there are a paper mill, a distillery, a flour mill and a saw mill. In this city, there are on the power, five large flour mills, which have manufactured all the flour which has been made here during the past year. Also an oil mill, and several manufactories in wood. There is now room for double the number of establishments, and one or two will probably be erected during the ensuing year.

The Board of Trade has reason to congratulate the citizens of Milwaukie on its present commercially healthful condition.

Manufactures.—The following table shows the value of the principal articles manufactured during the year ending March 1st, 1853:

Ale and beer, 33,900 bbls., valued at	$169,500 00
Barrels (flour, packing, and whiskey)	45,020 00
Billiard tables	26,500 00
Boiler work, bank vault doors, gas fixtures	15,200 00
Boots and shoes	103,000 00
Book binding, &c.	5,800 00
Bread and crackers	38,400 00
Brick (12,900,000 manufactured)	58,500 00
Cabinet making	92,000 00
Castings and iron, including locomotives, &c.	137,237 75
Clothing	230,000 00
Confectionery	23,000 00
Flour	311,552 50
Gas manufactured (3 months)	8,500 00
Gun factories and brass turnings	6,100 00
Jewelry	2,100 00
Lime	6,000 00
Linseed oil; one small factory has ceased running. Another has been put in operation upon the water power, and is capable of manufacturing 60 bbls. per month. 70 bbls. made	2,100 00
Mill stones	16,500 00

Paper, printing, including book paper, 170,000 lbs	$17,000	
Colored do., 3,000 lbs	300	
Hardware, do., 6,000 lbs	600	
Tea paper, 4,000 lbs	200	
Wrapping do., 130,000 lbs	6,500	24,600 00
Furs		10,000 00
Planed lumber and siding, sash, blinds, and shingles		78,800 00
Piano Fortes		3,360 00
Saleratus		18,000 00
Starch (40,000 lbs.)		2,600 00
Stone ware		2,100 00
Soap and candles, 500,000 lbs. soap, and 120,000 lbs. candles		37,000 00
Tanning hides and skins		175,304 33
Threshing machines		16,240 00
Tin, sheet iron, and copper manuf		38,862 29
Tobacco and cigars		11,550 00
Trunks and harness		48,000 00
Wagons, coaches, trucks, &c		23,750 00
Window shades		1,800 00
Whiskey (11,811½ bbls. manuf.)		91,537 83
Woollen goods		21,148 62
Miscellaneous		200,000 00
		$2,050,663 32

The aggregate of the above shows Milwaukie to be no insignificant city in respect of manufactures, and that she offers superior inducements as a residence to artisans. Some of the items enumerated, particularly that of malt liquors, whiskey, boots and shoes, tanning, clothing, iron castings, &c., are surprising to those who have not paid particular attention to these branches of trade. The item of iron castings includes the *locomotives* manufactured by Walton & Co., at the Menomonee Foundry. This establishment is soon to be conducted by a chartered company, the requisite stock subscription ($100,000) having been made up. The patterns, &c., are now all completed, and the company are able to turn out one locomotive each month. Those they have constructed prove to be A No. 1, and home manufactures should be encouraged. The items of malt liquors and whiskey show that we have Anti Maine-Liquor-Law men "among us."

The manufactures enumerated above do not include house and ship building, which we give below:

House-building.—Francis Charnley, master builder, has furnished statistics of the number, kind, and value of buildings erected during the year ending March 1st, of which the following is the summary:

129 frame houses and 40 brick buildings, (including Gas Works), at a cost of	$415,150 00

Tonnage.—The following is the aggregate tonnage of vessels owned in Milwaukie:

Sail vessels completed	6,258 tons.	
Do. now being built	1,490 tons.	7,748
Steam tonnage		800
Total number of tons		8,548

During the past year three vessels have been launched, and six are now on the stocks.

Shipments.—As is stated above, the following aggregate of shipments from this port during the season of 1852, has been taken from the books of those engaged in the business, and may be relied upon as correct. The published figures of 1851, having been taken from the Collector's books, fail to give an accurate idea of the business of that year. We compare a few items only. It will be seen that the shipments of grain in 1852 are so far in advance of those of 1851, as to render comparison useless:

	1852.	1851.
Flour, bbls	88,597	101,811
Wheat, bushels	394,386	130,744
Barley, bushels	345,620	99,897
Oats, bushels	428,811	55,124
Rye, bushels	67,759	none.
Rye flour, bbls	124	
Corn meal, tons	37	
Live and dressed hogs, lbs	1,771,364	
Pork, bbls	19,603	
Smoked hams, lbs	102,314	
Pickled do., bbls	274	
Smoked shoulders, lbs	85,972	
Pickled do., bbls	21	
Lard, packages	1,226	
Tallow, bbls	324	
Beef hams, bbls	1,112	
Navy beef, bbls	6,661	
Vinegar, bbls	887	
Eggs, bbls	540	
Butter, kegs	811	
Beans, bbls	293	
Saleratus, lbs	150,000	
White fish, bbls	77	
Bran and shorts, tons	300	
Dried peaches, bbls	13	

	1852.
Hops, lbs	11,625
Brick	700,000
Wool, lbs	321,121
Rags, lbs	30,000
Salt, bbls	190
Ale, bbls	2,400
Whiskey, bbls	712
Hides	12,990
Flax, lbs	4,211
Malt, bushels	6,376
Flour barrels	2,008
Cattle, head	165
Horses, head	75
Fruit, bbls	270
Broom corn, tons	227
Ashes, casks	3,291
Grass seed, bushels	5,851
Furs, bales	139
Lead, lbs	218,208
Shot, lbs	31,150
Stave machine	1
Dressed staves	167,000
Pipe do	22,000
Tobacco, bbls	69
Ivory black, bbls	100
Merchandise, tons	1,230
Barrels bulk	6,304

It will be seen by the above, that while the shipments of flour are 101,811 bbls. in 1851, to 88,597 in 1852, being a falling off of 13,214 bbls.; yet the shipments of grain are 1,236,576 bushels in 1852, to 285,765 in 1851, being an increase of 950,811 bushels in 1852.

By comparing the above table with that of 1853, it will be seen that the amount of produce in store at the opening of navigation this year was more than double that of 1853. A large amount of produce went forward last fall, and also heavy

amounts have come for shipment *since the opening of navigation*, and still the value *in store* on 20th of March was over *two millions of dollars.*

Amount of Produce in store on March 20th, 1853, to be forwarded.

Flour, bbls	45,220	Grass seed, bushels	1,826
Pork, do	15,821	Beans, do	403
Beef, do	269	Malt, do	500
Lard, do	1,540	Flaxseed, do	274
Butter, lbs	5,000	Wool, lbs	7,311
Wheat, bushels	225,600	Lead, pigs	150
Rye, do	22,200	Broom corn, bales	310
Oats, do	65,249	Hops, do	20
Barley, do	36,500	Flax, do	19
Corn, do	70		

Produce in store at Milwaukie, March 20th, 1854.

Wheat, bushels	460,000	Pork and lard, bbls	30,000
Rye, do	80,000	Beef, do	10,000
Oats, do	155,000	Timo. seed, do	4,000
Corn, do	32,000	Tobacco, tons	50
Barley, do	75,000	Broom corn, do	100
Flour, bbls	75,000	Hides and ashes, valued $50,000.	

No full report has been made by the Board of Trade for the spring of 1854; but the number of arrivals and departures have largely increased, as have also the number of emigrants arriving, and the amount of imports.

It appears that a larger amount of produce remains to go forward at the opening of navigation, at this point, than at all others on Lake Michigan combined, or at any point on Lake Erie.

Arrivals and Departures.—During the season of navigation in 1852, the number of arrivals, according to the books of the Collector, was as follows:

Steamers	841	
Propellers	330	
Schooners	393	
Sloops	1	
Brigs	34	1,599

Departures about the same as arrivals.

Lumber.—The lumber trade during the year past has been lighter than for the year 1851, although prices have been a shade better. The following are the total receipts for the season of 1852:

Lumber, feet	12,649,426
Laths	1,565,000
Shingles	6,820,000
Shingle bolts, cords	800
Cedar posts	3,000

Beef and Pork.—Wisconsin beef stands as high in the New-York market as any produced in this country. Cattle are as

good in respect of stock, as well fattened, and as well packed, as the best from our neighbors of Illinois. The total amount packed during the season was 10,151 barrels.

The total number of barrels of pork, packed during the last season, amounts to 23,707 barrels. The pork generally has brought a high price, and farmers have reaped a rich harvest, the current rates having been $5 and $6.75 during the season.

Railroads.—The past year has been fruitful of railroad enterprises. Charters have been granted by Legislature, which, if rendered efficient, would, when laid down upon the map, make Wisconsin look like a spider's web. *Some* of them will, doubtless, be built. We notice those only which are tributary to Milwaukie, charters for which have been granted.

The Milwaukie and Mississippi road will be, when completed (with its branch to Janesville) to the Mississippi River, *via* Madison, 200 miles in length. The direct road is now in operation to Milton, 62 miles, which, together with the Janesville branch, 8 miles, makes 70 miles of road now in running condition, and tributary to Milwaukie. We are under obligation to Mr. S. K. Platt for the following statement of the business of this road for the year ending March 1st, 1853. It will be borne in mind, on reading the following table, that the road was not opened to Janesville until January 8th, of the present year, and was also pushed forward from different points beyond Whitewater at different periods during the past year.

Table showing the amount of Freight moved during the year ending March 1853, on the Milwaukie and Mississippi Railroad—EASTWARD.

Wheat in bush	296,672	Pork in barrels	432
Corn in bush	5,450	Live stock in numbers	2,031
Oats in bush	30,442	Flax and tow in bales	119
Potatoes in bush	2,598	Stone in cords	7¾
Barley in bush	67,095	Lumber in feet	18,886
Rye in bush	14,471	Potash in barrels	55
Wool in bales	231	Sundries in pounds	1,365,815
Flour in barrels	19,397	Whiskey in barrels	330
Butter in kegs	758	Barrels for packing	3,175
Pork in hog, No	10,323	Lard in barrels	44½
Weight of hogs, lbs	1,961,370	Highwines in barrels	371

Table showing the amonnt of Freight moved during the year ending March 1, 1853, over the Milwaukie and Mississippi Railroad—WESTWARD:

Merchandise in pounds	6,412,911	Whiskey in barrels	352
Lumber in feet	3,961,978	Stoves, No	790
Lath in bundles	25,014	Bricks, No	51,805
Shingles, M	2,427¾	Live stock, No	19
Coal in pounds	443,620	Iron in pounds	8,797,999
Salt in barrels	4,857	Sundries in pounds	66,230
Furniture, &c., in pounds	65,473	Barrels for packing	829

Other roads surveyed, or provisionally chartered, are as follows:

Green Bay, Milwaukie and Chicago:—		
Between Milwaukie and Chicago, miles	85	
Do. do. Green Bay	120	205
Milwaukie and Beloit		70
Do. Watertown	46	
Continuation to Ft. Winnebago	50	96
La Crosse and Milwaukie, (*via* Iron Ridge)		200
Milwaukie, Fond du Lac and Green Bay		130
Milwaukie and Mississippi (as above)		200
Total number of miles		901

The above makes seven railroads, radiating in different directions from Milwaukie. Of these there will probably be built at the end of the present year:

Milwaukie and Mississippi, to Madison	100
Do. do. branch to Janesville	8
Green Bay, Milwaukie and Chicago, between Milwaukie and Chicago.	85
Milwaukie and Watertown	46
La Crosse and Milwaukie (to Iron Ridge)	45
Milwaukie, Fond du Lac and Green Bay, (to Fond du Lac)	62
Total number of miles	346

Plank Roads.—The following is a schedule of the several plank roads diverging from this city, with their length annexed:

Milwaukie and Waukesha, miles		10
Milwaukie and Janesville, main trunk to Mukwonago	25	
Do. do. branch to Rochester	13	38
Milwaukie and Watertown		45
Do. Wauwatosa		5
Do. Lisbon and Hartland		25
Do. Fond du Lac		12
Do. Green Bay		10
Do. Humboldt		5
Total		150

These are all, or nearly all, completed and in operation. The stock, as a general thing, pays well, some of them having declared very heavy dividends. Most of the above roads are chartered to extend farther into the country; but in the present *furor* for railroads, it is hardly probable that any great addition will be made.

Art. XIII.—COTTON CROP AND COTTON STATISTICS OF THE UNITED STATES.*

Statement and total amount for the year ending 31*st August*, 1854.

NEW-ORLEANS.			
Export—			*Bales.*
To foreign ports	1,236,653		
Coastwise	192,527		
Stock, 1st September, 1854	24,121		
		1,453,301	
Deduct—			
Stock, 1st September, 1853	10,522		
Received from Mobile, Montgomery, &c.	64,806		
Received from Florida	9,368		
Received from Texas	21,680		
		106,376	
Total		1,346,295	
MOBILE.			
Export—			
To foreign ports	336,963		
Coastwise	178,668		
Consumed in Mobile	1,465		
Stock, 1st September, 1854	29,278		
		546,374	
Deduct—			
Received from New-Orleans	63		
Received from Texas	111		
Stock, 1st September, 1853	7,516		
		7,690	
Total		538,684	
TEXAS.			
Export—			
To foreign ports	18,467		
Coastwise	90,081		
Stock, 1st September, 1854	2,205		
		110,753	
Deduct—			
Stock, 1st September, 1853		428	
Total		110,325	
FLORIDA.			
Export—			
To foreign ports	49,190		
Coastwise	165,194		
Stock in Apalachicola, 1st September, 1854	583		
		155,967	
Deduct—			
Stock in Apalachicola, 1st Sept., 1853		523	
Total		155,444	
GEORGIA.			
Export—			
To foreign ports—Uplands	98,580		
" Sea Island	3,861		
Coastwise—Uplands	203,363		
Sea Island	11,667		
Stock in Savannah, 1st September, 1854	3,200		
Stock in Augusta, 1st September, 1854	8,318		
		328,989	
Deduct—			
Stock in Savannah and Augusta, 1st September, 1853		12,984	
Total		316,005	
SOUTH CAROLINA.			
Export from Charleston—			
To foreign ports—Uplands	217,603		
Sea Island	18,154		
Coastwise—Uplands	190,675		
Sea Island	6,612		
Stock in Charleston, 1st September, 1854	17,031		
	450,075		
Export from Georgetown—			
To Northern ports	3,209		
		453,284	
Deduct—			
Stock in Charleston, 1st September, 1853	15,126		
Received from Florida	4,133		
Received from Savannah	17,271		
		36,530	
		416,754	
NORTH CAROLINA.			
Export—			
To foreign ports	none.		
Coastwise	11,524		
VIRGINIA.			
Export—			
To foreign ports	500		
Coastwise, and manufactured, (taken from the ports)	21,086		
Stock, 1st September, 1854	750		
		22,336	
Deduct—			
Stock, 1st September, 1853		400	
		21,936	
Received at N. Y. by N. Y. & Erie Canal		1,182	
" N. Y. by N. Y. & Erie Railroad		2,258	
" Balt. and Phila. from Tennessee, &c.		8,990	
Total crop of the United States		2,936,027	

Comparative View of the Crop of Cotton for 1852-3 *and* 1853-4.

Received at—	1852-3.	1853-4.
New-Orleans	1,380,875	1,346,925
Alabama	545,029	538,864
Texas	85,790	110,325
Florida	179,476	155,444
Georgia	349,490	316,005
South Carolina	463,203	416,754
North Carolina	23,496	11,524
Virginia	25,783	21,936
Overland, at New-York, &c.	9,740	12,430
Total crop, 2 years	3,262,882	2,930,027
Decrease from 1852-3		332,855
" 1851-2		85,002

* From the Shipping and Commercial List and the Economist, New-York.

Comparative Statement of Growth.

Crop of—	Bales.	Crop of—	Bales.	Crop of—	Bales.
1853—4	2,930,027	1842—3	2,378,875	1832—3	1,070,438
1852—3	3,262,882	1841—2	1,683,574	1831—2	987,477
1851—2	3,015,029	1840—1	1,634,945	1830—1	1,038,848
1850—1	2,355,257	1839-40	2,177,835	1829-30	976,845
1849-50	2,096,706	1838—9	1,360,532	1828—9	857,744
1848—9	2,728,596	1837—8	1,801,497	1827—8	720,593
1847—8	2,347,634	1836—7	1,422,930	1826—7	957,281
1846—7	1,778,651	1835—6	1,360,725	1825—6	720,027
1845—6	2,100,537	1834—5	1,254,328	1824—5	569,249
1844—5	2,394,503	1833—4	1,205,394	1823—4	509,158
1843—4	2,030,409				

Export to Foreign Ports from September 1, 1853, to August 31, 1854.

From	To Great Britain.	To France.	To North of Europe.	Other Foreign Ports.	Total.
New-Orleans.....bales	813,736	193,571	93,375	135,971	1,236,653
Mobile	231,230	76,752	14,466	14,515	336,963
Texas	6,191	4,275	8,001	—	18,467
Florida	43,086	1,965	2,429	1,710	49,190
Savannah	92,363	6,487	2,921	670	102,441
Charleston	162,970	41,245	12,641	18,901	235,757
North Carolina	—	—	—	—	—
Virginia	500	—	—	—	500
Baltimore	2,159	—	200	52	2,411
Philadelphia	3,490	—	—	1,472	4,962
New-York	245,746	49,763	29,845	2,742	328,096
Boston	2,279	—	1,294	135	3,708
Grand total	1,603,750	374,058	165,172	176,168	2,319,148
Total last year	1,736,860	426,728	171,176	193,636	2,528,400
Decrease	133,110	52,670	6,004	17,468	209,252

Consumption.

			Bales.
Total crop of the United States, as before stated			2,930,027
Add—			
Stock on hand at the commencement of the year, 1st September, 1853:			
In the Southern ports		47,499	
In the Northern ports		88,144	
			135,643
Makes a supply of			3,065,670
Deduct therefrom—			
The export to foreign ports	2,319,148		
Less foreign included	1,565		
		2,317,583	
Stock on hand, 1st September, 1854:			
In the Southern ports	85,486		
In the Northern ports	50,117		
		135,603	
Burnt at New-York and Philadelphia		1,913	
			2,455,099
Taken for home use			610,571

Quantity Consumed by and in the Hands of Manufacturers.

NORTH OF VIRGINIA.

	Bales.		Bales.		Bales.
1853—4	610,571	1843—4		1834—5	216,888
1852—3	671,009	1842—3	325,129	1833—4	196,413
1851—2	603,029	1841—2	267,850	1832—3	194,412
1850—1	404,108	1840—1	207,288	1831—2	173,800
1849-50	487,769	1839-40	295,193	1830—1	182 142
1848—9	518,039	1838—9	276,018	1829-30	126,512
1847—8	531,772	1837—8	246,063	1828—9	118,853
1846—7	427,967	1836—7	222,540	1827—8	120 593
1845—6	422,597	1835—6	236,733	1826—7	103,483
1844—5	389,046				

We now give our usual table of the amount of cotton consumed the past year in the States south and west of Virginia, and not included in the receipts at the ports. We have increased the estimate, as a whole, from the year previous, but

give it only for what it purports to be, an *estimate*, which we believe approximates correctness. Thus:

Quantity Consumed.

	1854.	1853.	1852.	1851.
North Carolina.....bales	20,000	20,000	15,000	13,000
South Carolina	12,000	10,000	10,000	10,000
Georgia	23,000	20,000	22,000	13,000
Alabama	6,000	5,000	5,000	4,000
Tennessee	6,000	5,000	7,000	8,000
On the Ohio, &c.	38,000	30,000	16,000	12,000
Total to September 1	105,000	90,000	75,000	60,000

To which, if we add (for the past year) the stocks in the interior towns, &c., the quantity burnt in the interior, and that lost on its way to market, to the crop as given above, received at the shipping ports, the aggregate will show very nearly the amount raised in the United States during the past season—say in round numbers, 3,000,000 bales, against 3,360,000 for the year 1852-3—3,100,000 for the year 1851-2, and 2,450,000 for the year before.

During the year just closed, there were received here 2,258 bales by way of the New-York and Erie Railroad, 1,182 by the New-York and Erie Canal, 7,490 at Baltimore, and 1,500 at Philadelphia, from the West, nearly if not quite all of which, it is believed, came from Tennessee, and we have accordingly added it in another place to the crop in the country.

The quantity of *new* cotton received at the shipping ports to the 1st inst., amounted to 1,890 bales against 716 bales last year, and 5,125 the year before.

The shipments given in this statement from Texas are those by *sea* only.

It may be well to observe that the preceding statement of the crop is that of the United States *as a whole*, and does not purport to give the crops of the States, though the shipments, stocks, &c., are necessarily arranged under the different leading shipping ports or States, as the case may be. It is well known that, by the extension of railroads and other means of transit, oftentimes large quantities of cotton grown in one State are received at, and shipped from, the sea-ports of another, and this to a greater or less extent with every cotton-growing State in the Union.

Total Receipts of Cotton into the various Ports of the United States.

	1853-4.	1853.	1851-2.	1850-1.	1849-50.	1848-9.	1847-8.
New-Orleans	1,346,925	1,580,875	1,373,464	933,369	781,886	1,093,797	1,190,733
Mobile	538,684	545,029	549,449	451,748	350,952	518,706	436,336
Florida	155,444	179,476	188,499	181,204	181,344	260,186	153,776
Texas	107,906	85,796	64,052	45,820	31,263	38,827	39,742
Georgia	316,005	349,490	325,714	322,376	343,635	391,372	254,825
South Carolina	416,754	463,203	476,614	387,075	383,265	458,117	261,752
North Carolina	11,524	23,496	16,242	11,928	11,861	10,041	1,518
Virginia	21,936	25,783	20,995	20,737	11,500	17,550	8,951
Railroads	12,430	9,740	—	—	—	—	—
Total	2,930,027	3,262,882	3,015,029	2,355,257	2,006,706	2,728,596	2,347,634

Total Foreign Exports of Cotton from the United States.

	1853-4.	1853.	1851-2.	1850-1.	1849-50.	1848-9.	1847-8.
To Great Britain	1,603,750	1,736,860	1,668,749	1,418,265	1,206,771	1,537,901	1,324,265
France	374,058	426,728	421,375	301,358	289,627	368,259	279,172
North of Europe	165,172	171,176	168,875	129,492	72,156	155,458	120,348
Other foreign ports,	176,168	193,636	184,647	139,595	121,001	156,226	134,476
Total	2,319,148	2,528,400	2,443,646	1,988,710	1,590,155	2,227,844	1,858,261

Stock of Cotton on hand in the United States on 31st August.

	1854.	1853.	1852.	1851.	1850.	1849.	1848.
New-Orleans	24,121	10,522	9,758	15,390	19,612	15,480	37,401
Mobile	29,278	7,516	2,319	29,797	12,902	5,046	23,554
Florida	583	523	451	273	1,148	615	507
Texas	428	428	317	596	265	452	747
Savannah and Augusta	11,588	12,984	6,657	34,011	29,069	25,319	36,603

	1854.	1853.	1852.	1851.	1850.	1849.	1848.
Charleston	17,031..	15,126..	11,146..	10,953..	30,698..	33,806..	14,084
North Carolina	— ..	— ..	— ..	— ..	— ..	— ..	—
Virginia	750..	400..	420..	620..	1,000..	1,000..	444
New-York	32,988..	67,675..	45,710..	35,410..	60,720..	67,720..	41,967
Other Northern ports	17,129..	20,469..	14,250..	3,850..	15,456..	15,456..	16,130
Total	133,856..	135,643..	91,176..	128,900..	167,930..	154,753..	171,468
United States consumption	610,571..	671,009..	603,029..	404,109..	487,769..	518,039.	531,772

The consumption here given is the quantity taken by spinners from the out ports. The consumption in the interior was given by census for 1850 at 67,460, and it must now be at least double.

Art. XIV.—GRAIN AND PROVISION TRADE OF CHARLESTON, S. C.

[From the circular of Neuffer, Hendrix & Co., we glean some particulars of this trade in Western produce, of which so large a part is likely to be transferred to Charleston.]

A NEW era has dawned upon Charleston, and she has just tasted the first fruits of her judicious appropriations to railroads connecting her with the Great West, and when that, the greatest of them all, the Blue Ridge Railroad, is completed, she will reap the full benefit. Within the past year, the Nashville and Chattanooga Road has been completed, and turned a considerable quantity of bacon and grain to this market, and we may expect a still larger quantity next season. The road from Loudon to Knoxville, Tennessee, is now in a state of completion, and will soon bring us the products of that fertile region, and will save the water carriage from Knoxville to Loudon, which, heretofore, has been a great drawback in our trade with that region of Tennessee. Other roads are diverging, from the different termini, which will soon place Charleston in connection with all parts of the country, which, from her position, are naturally tributary to her. Charleston is now independent of the North for her breadstuffs and provisions.

Flour.—The receipts per railroad, for the past year, have been about 80,000 barrels, of which some 35,000 barrels have been exported foreign and coastwise. Heavy orders were received here from Europe, but could only be partially filled, as the majority of flour received here was in sacks, which merchants holding orders would not risk. This, we trust, will not be the case another year. We, however, filled an order for 3,000 sacks for Liverpool, which arrived there in good condition, and gave satisfaction. But, as a general rule, barrels always take the precedence. Charleston is now a flour market, and has a reputation to establish; and we would impress upon our friends the necessity of paying particular attention to the putting up of their flour, as to weight, classification of quality, and order of package. Nothing is to hinder Tennessee, Georgia, North and South Carolina flour from acquiring a reputation equal to any manufactured, as it is admitted that their wheat is equal to any grown. For consumption it would not make so much difference, but even then it would pay the manufacturer to establish a reputation for full weight, good order and quality, as represented by his brand. The past year, there has been considerable flour shipped coastwise to New-York, Boston, and some even to Philadelphia and Baltimore; (the two latter places from which Charleston formerly received her supplies;) and, we say with pride, stood the test with their best brands, and sold for equal prices, some sack flour from Tennessee bringing the high price of $10 per barrel; all the objection urged against it being its irregularity in order and classification of quality, and, in too many cases, short weight.

We would remark, however, that Charleston cannot look to these markets to take her surplus flour. She must look to the same markets they do, and there is nothing to hinder her from competing successfully; all she wants is the enterprise to open the trade. There is no occasion for flour to be from $1 to $1 25 per barrel lower in Charleston (which has been the case for some time past) than in those markets. This can be only temporary, and the natural disadvantages of a new trade. Our Flour Inspection Law has many serious objections, and has had our attention. The inspection fee is entirely too high. The reduction of the fee, and other charges required, will be brought before the Legislature at its next session, and we have every assurance of success.

Corn is another article to which we would call your attention. The consumption of Charleston and vicinity is about 800,000 bushels. The receipts per railroad the past year have not exceeded 150,000 bushels. This should not be; we have had to get our supplies from North Carolina and Maryland. Georgia and Tennessee should send us enough for consumption at least, to say nothing of export. Corn should be put up in osnaburg sacks, or good heavy domestic, containing about two bushels each; in fact, it would be well to make them of uniform size, and holding 112 lbs., equal to two bushels, as purchasers buying to sell again, save the trouble of re-weighing or measuring, and it makes it handy to retail. A considerable quantity of corn is shipped from Charleston to the West Indies, but buyers have to buy it by measurement, as that trade requires it in two bushel sacks. The sacks should be securely sewed, as, if they are not, the loss in transportation is heavy. Osnaburg or heavy domestic sacks are pereferable to gunny, and cost less.

Oats, also, are sold here in large qnantities; but, heretofore, we have had to depend almost entirely upon the North for this article, when the West should supply us. Oats never go below 40 cents per bushel here, and an average price is 50 cents, and frequently go as high as 65 and 70 cents.

Peas are always high here, and bring relatively higher prices than any other grain. The past year they have been very scarce, and, since January, have been selling from $1 10 to $1 25. It would seem that we ought to get our supplies by railroad, but as yet, have got them from North Carolina, by water.

Bacon is another new article by railroad, this being the first season that any has arrived, and we are sorry to say, a very unpropitious one for an opening. Prices have been extremely low in all markets, but, as low as it has been, prices in Charleston have been ½ cent to ¾ cent above Baltimore, and 2 to 2½ cents above New-Orleans. There is a large quantity of bacon sold here, and, until the past season, we have received our supplies from Baltimore, New-Orleans and Cincinnati. Tennessee sides are unexceptionable as to quality, but the packages are inferior. Shippers would do well to attend to this particular. Bacon should be packed in new casks, made expressly for the purpose, and of uniform size, and it will pay the shippers to do so. Our Tennessee friends, however, will have to improve in the mode of cutting their hams. They have brought a high price here the past season, but those shipped from Tennessee have been selling at 6 to 6½, while Baltimore and Cincinnati have been bringing 11 to 14 cents, without having any advantage in quality, but simply because they were cut in the proper manner. We would call your attention to this matter, as it is one of great importance to you.

Packages, too, is an item here again. Hams should be packed in neat barrels or tierces, not to exceed 600 lbs. gross. It may appear strange, but we assure you that attention to these particulars is of great importance.

Art. XV.—EDITORIAL.

Party Leaders. Sketches of Thomas Jefferson, Alexander Hamilton, Andrew Jackson, Henry Clay, and John Randolph, of Roanoke; including notices of many other distinguished American statesmen. By J. G. Baldwin, author of the "Flush Times of Alabama and Mississippi." New-York: D. Appleton & Co. Washington: Taylor & Maury. 1854.

A very able series of papers which the author proposes to continue, and which should be read and studied by all who desire to know the political history of their country, or to have themselves "a place in the picture."

Virginia Comedians; or, Old Days in the Old Dominion; edited from the manuscript of C. Effingham, Esq. In 2 volumes. New-York: Appleton & Co. Washington: Frank Taylor.

"That strange Virginia of 1776, with its passions, humors, and anomalies of every description, afforded a broad field for dramatic narrative, and the author has endeavored to embody some of its peculiarities in this rapid and shifting panorama." His wish is simply to depict some Virginia scenes and personages ten years before the Revolution. It is written with vigor and spirit, but is anonymous.

Captain Canot; or, Twenty Years of an African Slaver. Being an account of his career and adventures on the coast of Africa, in the interior, on shipboard, and in the West Indies. Written out and edited from the Captain's journal, memoranda, and conversations. By Brantz Mayer. New-York: Appleton & Co. Washington: —— Farnam.

The name of Brantz Mayer is a sufficient guarantee for the literary excellence of the work, and the subject is itself so full of interest that, even in ordinary hands, it would attract attention everywhere. Captain Canot was a veritable trader, and the work is founded upon his veritable experiences. There are chapters of great power, and the most exciting interest.

The School for Politics; a Dramatic Novel. By Charles Gayarre. New-York: D. Appleton & Co., 346 and 348 Broadway. 1850. 12mo., pp. 158.

"This is an admirable hit at the tergiversations and somersets of the politicians of the day. The author, as usual in all such cutting sarcasms, disclaims all intention to be personal in his delineation of the characters of his drama; and indeed there is so much that every mere politician, in every section of the country, might take to himself, that we have no reason to doubt that the scenes of political degradation he describes are altogether fictitious. The author is known to us as a gentleman of high standing in New-Orleans, whose occasional visits to this city have made him acquainted with most of our eminent men, who will no doubt be ready to testify to his respectability, and to his entire freedom from all malevolent design in the construction of his dramatic novel. The characters are, in truth, so well delineated that every reader will fancy that the author had some particular individual in his eye of his own familiar acquaintance. So it is, and must be, with all true painters of nature: the individual is but a type of this kind; and a description sufficiently correct to lead us to a knowledge of the genus cannot but be recognized as a faithful portrait of every individual of the family. Those to whom the several characters are applicable would do well to profit by the useful moral which the book is intended to convey. All readers will find amusement in the life-like scenes which it depicts."

Lectures on the True, the Beautiful, and the Good. By M. V. Cousin. With an Appendix on French Art. New-York: D. Appleton & Co. 1854.

An able volume from one of the first metaphysicians and philosophers of Europe.

UNIVERSITY OF LOUISIANA.

MEDICAL DEPARTMENT.

THE Annual Course of Lectures in this Department will commence on MONDAY, November 13, and will terminate in the ensuing March.

James Jones, M. D., Professor of Practice of Medicine.
J. L. Riddell, M. D., Professor of Chemistry
Warren Stone, M. D., Professor of Surgery.
A. H. Cenas, M. D., Professor of Obstetrics.
A. J. Wedderburn, M. D., Professor of Anatomy.
Gustavus A. Nott, M. D., Professor of Materia Medica.
Thomas Hunt, M. D., Professor of Physiology and Pathology.
Cornelius C Baird, M. D., } Demonstrators of Anatomy.
Samuel P. Choppin, M. D., }

The rooms for Dissecting will be open on the Third Monday in October.

The Faculty are Visiting Physicians and Surgeons of the Charity Hospital, and attend this Institution from November to April.

The Students accompany the Professors in their visits, and, free of expense, enjoy extraordinary practical advantages.

There are, during the Session, about eight hundred persons prescribed for daily.

In 1853, the number of patients was thirteen thousand seven hundred and fifty-nine.

Sep., 54, 1 yr. THOMAS HUNT, M. D., *Dean.*

THE GREAT FAMILY AND PLANTATION MEDICINE!

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In the fevers and other complaints incident to southern and southwestern life, Wright's Indian Vegetable Pills are unsurpassed in efficacy. They have cured YELLOW FEVER after every other remedy had failed. They have broken up the AGUE and BILIOUS FEVER in all their forms. They are thoroughly anti-bilious in their action; powerful for good, and yet innocent of evil.

If resorted to in time this medicine will be found to answer all the requirements of the family and *Plantation*. Either ADULTS or CHILDREN afflicted with any of the prevalent disorders will find a dose or two of this medicine thoroughly efficacious—not only curing the immediate sickness, but PURIFYING the BLOOD, AIDING the CIRCULATION and IMPROVING the *general health*.

Space will not allow of the introduction of the numerous testimonials received by the proprietor. He therefore subjoins only two or three of them, the first of which was received from Vera Cruz, in 1849, while the Yellow Fever was quite prevalent, and is signed, as will be seen, by the HIGHEST MEDICAL AUTHORITIES of that city.

TRANSLATION.

We, the undersigned, licensed Physicians in and for the city of Vera Cruz, do hereby certify, that we have used **Dr. W. Wright's Indian Vegetable Pills,** bought of Mr. Felix Rovira, Agent in this city, and having applied said Pills to cure the different diseases for which they are recommended by Dr. Wright, we have found them in every respect satisfactory, and we therefore recommend their use to every person in the republic who may be suffering from any of the maladies for which they are recommended by their inventor.—And in order that the present certificate may be used as convenient to the parties, we have signed it in Vera Cruz, this 10th day of August, 1849.

(Signed,) GEORGE GAIDAN. MANUEL HOYAD.

FORBES' TOWN, Bute Co., California, March 26th, 1854.

Sir:—I take upon me to forward you a few lines, to let you know that I have been using your very effective medicine for over one year. What the name of my complaint is I cannot say, but your Pills have made a very great alteration in my outward appearance, and my inward feeling is most pleasant to what it was. I had bad health for a considerable time, and had tried a great many remedies, but all proved to have no effect; in fact, your Pills are the only medicine that I have ever found equal to recommendations. I can assure you that I value them more than the gold I am digging, and trust that I shall always have some of them beside me.

I remain, your well-wisher,
JAMES HALKET.

PITTSBURGH, Pa., April 29, 1854, 410 Liberty Street.

Dear Sir:—I feel much pleasure in testifying to the excellence of your *Indian Vegetable Pills* as a cure and preventive of Diarrhœa. Last year I suffered very severely during many weeks from this horrible disease, being all the time under the care of physicians, and constantly taking medicine, from which I derived no benefit. At last I was induced to take a dose of your Vegetable Pills, and found four Pills not only effect an entire cure, but so radically to change my system that I have never been troubled with the complaint since—my general health being so good that all my friends remark upon the improvement.

Yours, respectfully,
JOHN THOMPSON.

To DR. WM. WRIGHT, 169 Race St., Philad'a, Pa.

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